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The Manchester School

Edited by
S. G. ROBERTS and **J. STAFFORD**

Chairman of the Editorial Board
Professor G. W. DANIELS

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The Editorial Board welcomes contributions, especially from graduates of the Victoria University, who by virtue of their positions in business and the professions, are capable of making valuable contributions to economic literature.

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THE OBJECTIVE BASIS OF ECONOMICS

In a rational community it may be assumed that the chief criterion of economic advance over a period will be whether the members of the community, whom for short we may call " producers," in return for a given expenditure of effort, have obtained a larger or more appropriate[1] amount of the commodities and services which constitute their objective income. If these commodities and services have to be purchased with money, and if the average money income of the producers is taken as £x weekly, economic advance will be seen if this sum will purchase a larger or more appropriate amount of commodities and services. As we may assume that, in a rational community, each producer will expend the whole of his £x somehow, let us say that he expends it on commodities and services rather than go without them[2]. If conditions change, so that £x will not go as far as before, the result must be seen in a smaller or less appropriate return in commodities and services, and *vice versa* if conditions change in the opposite direction. In either case the fact that the £x is expended is proof that each expender is willing to expend it on the commodities and services he obtains rather than go without them.

From the above reasoning it will be observed that, with a fixed money income, the effect upon producers of a cheapening, or what means the same thing, of an increase in the supply of commodities and services they purchase, is an increase of their objective income. They can either buy more of the old commodities and services, or buy new ones which may appear, or do both. On the other hand, the effect upon producers of the commodities and services they purchase becoming dearer, or what means the same thing, of a decrease in their supply, is that they must either buy less of all or of some of the commodities and services they bought before, or cease buying some altogether, so that their objective income is

[1] A cheap wooden shanty and an expensive stone house are both dwellings but the latter is more appropriate than the former.

[2] For the purpose of this discussion this expenditure may be taken to include saving. In a rational community, hoarding, as distinct from saving, would have no place.

decreased. Apparently a rational individual, if necessity compelled, would be willing to expend the whole of his weekly £x on the commodities and services he regarded as vital to his existence rather than go without them. If he could not get them for £x he must, perforce, seeing that £x is the whole of his money income, cease to exist. It appears, therefore, that, for a rational individual, we might start with that selection of things which he regards as vital to his existence, and on which, if necessity compelled, he would be willing to expend the whole of his money income rather than go without them. As these vital things became cheaper, we might further conceive of this individual extending his purchase of them, and reaching out to others, thus building up a systematic scheme of demands for commodities and services upon which, as evidenced by the fact that throughout the process he does so, he is willing to expend the whole of his money income rather than go without them. Evidently the result of this process for the individual is an increase of his objective income in the form of a larger or more appropriate amount of commodities and services. As the whole of his money income is absorbed in purchasing these commodities and services, and as the amount of money he pays can be the only objective measure, in terms of money, of the worth of the commodities and services to him, or of what he would be willing to pay rather than go without them, to say that they are worth more to him, or that he would be willing to pay more rather than go without them, would seem to be a statement which lacks objective justification.

As is well-known, however, statements to this effect have been made in connection with the conception of consumer's surplus. Thus, in the famous tea illustration, the man who buys one pound of tea annually when the price is 20s. a pound, and extends his purchases to seven pounds as the price falls to 2s., thus paying the total sum of 14s., is said to have obtained something which is worth at least 59s. to him. As, presumably, the process can be repeated with every commodity and service the man buys, until the amount of money at his disposal is exhausted, it follows that these commodities and services must be worth far more to him, in terms of money, than the amount he expends upon them. According to the consumer's surplus conception the difference between what the commodities and services are worth to the man, in terms of money, or between what he would be willing to pay rather than go without them, and the amount he actually pays, is the money measure of this surplus.

Between the view out of which the consumer's conception emerges, and that outlined in the preceding paragraphs, it is apparent that there is a difference which may perhaps be seen more clearly if they are set out in figures as in the following table. In the table suppose that the whole amount of money which an individual has to expend is 40s. weekly and that, with the consumer's surplus conception, it is regarded as being expended on successive increments of eight distinct commodities or services so that when the margins are reached the surpluses, in terms of money, are as given in the last column. In the other case suppose that the 40s. is expended, as commodities and services become cheaper, on successive selections of them, 1 being one selection, 1 and 2 together another selection, and so on to 8, its being understood that each successive selection may comprehend commodities and services not included in preceding selections, as well as additional amounts of those which are included.

(*a*) Distinct commodities or services 1 to 8 (*b*) Selections of commodities and services first to eighth	Amount willing to pay	Amount actually paid	Surplus according to consumer's surplus conception
	s. d.	s. d.	s. d.
1	40 0	15 0	25 0
2	25 0	8 0	17 0
3	17 0	5 0	12 0
4	12 0	4 0	8 0
5	8 0	3 0	5 0
6	5 0	2 6	2 6
7	2 6	1 6	1 0
8	1 0	1 0	—
	110 6	40 0	70 6

The important difference between the two views illustrated in the above table is that, with the consumer's surplus conception, it is held, reasoning on the basis of the second column, that the eight distinct commodities or services, for which the individual pays the whole of the 40s. at his disposal, are worth to him, in terms of money, 110s. 6d. and that, consequently, he has a surplus on them measured by 70s. 6d. In the other view it is held that there is no surplus which can be thus measured, for what the individual buys is not eight distinct commodities or services, but one of eight selections of commodities and services, any of which, according to the prices which

obtain, requires the whole of the 40s. at his disposal for its purchase,[1] and that, consequently, in no intelligible sense can it be said that he is willing to pay more than this sum for the selection. If the table reveals anything of the nature of a surplus it is one which begins and finds objective expression in the larger or more appropriate selection of commodities and services which can be obtained for 40s. when that selection which the individual regards as vital to his existence can be obtained for less than 40s. This surplus, if it requires a name, might be more properly called a producer's surplus, and might, perhaps, serve a useful purpose in keeping before our minds the rather obvious truth that economic advance or retrogression are merely other words for an expansion or contraction of this surplus.

However, it may reasonably be objected that this is not quite the surplus which is contemplated in the consumer's surplus conception. This surplus is one which is seen in association with a commodity or service, and the justification offered of its being measured in money in the way already indicated, is that, if the commodity or service is treated as consisting of increments, the individual does actually show, by the fact that at a given price he buys one increment, and buys another increment only when the price is lower, that he is willing to pay more for the two increments than the amount of money required to buy them at the lower price. Evidently, this argument assumes that, when the individual buys two increments at the lower price, he is still willing to pay, and would actually pay, if it were required of him, the higher price for one increment. The argument, however, would again seem to lack objective justification. The difference between what the individual would be willing to pay and what he actually does pay is revealed when he buys another increment as the price falls. If he did not buy another increment as the price fell, but continued to buy only one, it could hardly be claimed, on the basis of the objective facts that he used to pay the higher price, and now pays the lower price, that he is still willing to pay the higher price.

The contention here is that, just as an individual does not buy distinct commodities or services but a selection of commodities and services, so he does not buy 1, 2, 3 . . . distinct increments of a commodity or service, but an *amount* consisting of 1 and 2 and 3 . . . increments. In other words, to take the tea illustration, the

[1] Thus, if prices are such that the individual is confined to the first selection this clearly requires the whole of his 40s. ; if prices are such that he can embark on the second selection, consisting of 1 and 2, again the 40s. is required, *i.e.*, 15s.+25s. and so on to the eighth selection.

individual, at a particular time, does not buy so many distinct pounds of tea, but so much tea, and the only measure available, in terms of money, of what he is willing to pay for the tea he buys is the amount of money he actually does pay. If the price of tea is 20s. a pound and he buys one pound, he is objectively willing to pay 20s. for it, and it is objectively worth 20s. to him. If the price falls to 14s. a pound, and he buys two pounds, he is objectively willing to pay 28s. for them, and they are objectively worth 28s. to him. The objective change in his position, is that, whereas when tea was 20s. a pound, one pound of tea appeared among the selection of commodities and services on which he expended the money at his disposal, when tea falls to 14s. a pound, he forgoes something of his previous selection of commodities and services to the extent that he has 8s., in addition to the 6s. by which the price of tea has fallen, so that now he can buy two pounds of tea, and this amount of tea figures among the selection of commodities and services on which he expends his money. If, on the other hand, we start with the position when tea is 14s. a pound, and when the individual expends 28s. in buying two pounds, and suppose that when the price rises to 20s. a pound, he buys only one pound, we can see that the objective change in his position is that now one pound instead of two pounds of tea figures in his selection of commodities and services, with a further alteration occasioned by the fact that he has the 8s. which he used to expend on tea free to expend on other things.[1]

As this matter appears to be of some interest in economic analysis it may, perhaps, be worth while pursuing it somewhat further. It is, of course, hardly necessary to mention that the consumer's surplus conception emerges as a result of an application of the

[1]It will be noticed that Dr. Marshall's bridge illustration can be analysed in much the same way. Here the argument is that because a man avails himself of a drive which costs 1s. when a bridge is destroyed on which 1d. toll is charged he is in at least as bad a position, owing to the destruction of the bridge, as if he had been deprived of 11d. This is not necessarily true. While it is true that the man, in order to have 1s. for the drive, must have forgone something of his selection of commodities and services represented in terms of money by 11d., it cannot certainly be said that he would not have done the same had the bridge not been destroyed but the toll increased by the smallest fraction. When the bridge was standing he might well have been on the margin of indifference as to whether he would forgo the commodities and services on which he spent 11d. and thus be in a position to avail himself of the drive rather than of the bridge. Thus the illustration does not prove that the bridge was worth appreciably more to the man, in terms of money, than the 1d. toll. Such a position is not imaginary, it can be verified in the case of anyone who has alternative means—one more expensive than the other—of, say, travelling from his home to his work.

marginal method of analysis to the utility which commodities or services have for their purchasers. Indeed, it is of significance that the method was introduced in conjunction with a larger recognition of the importance of utility in a consideration of demand. While there can be no doubt that this development represented a great advance in economic analysis, there can also be no doubt that the ardent advocacy of Jevons somewhat darkened counsel as well as enlightened it. Believing that the usual approach to the problem of value from the side of supply, with strong emphasis on the importance of cost, still vaguely interpreted in terms of labour, was a profound mistake, he went to the other extreme, and, in his approach to the problem from the side of demand, so emphasised the importance of utility as to make it, in his treatment, the dominant alternative to cost.[1] That this position could not continue, and that there would ultimately be a reconciliation on the lines of the scissors illustration was only to be expected, but, most certainly, a more valuable part of the work of Dr. Marshall was that in which he objectified cost and utility as supply prices and demand prices. But, although he went a considerable way, he did not go the full distance and insist unequivocally that it is these prices associated with quantities of commodities and services, not cost or disutility and utility, which constitute the data of economics as a positive science. This is not to deny that behind supply prices and demand prices there is something for which some such subjective terms as " real " cost or disutility and utility may have to be used in an exposition of economic theory ; it is, however, to contend that the economist, *qua* economist, is concerned with this something only as it finds objective expression in supply prices and demand prices associated with quantities of commodities and services.[2]

If this view had been held when utility and the marginal method became prominent in economic analysis it is unlikely that the consumer's surplus conception would ever have emerged. It is unlikely because, avowedly, the surplus is a surplus of utility or

[1] It is difficult to understand how Jevons, *Theory of Political Economy*, pp. 90, 165–6, could consistently criticise Ricardo on the ground that his theory rested on an assumed equality of labour which differed " infinitely in quality and efficiency," and, in his own treatment of a community " composed of persons differing widely in their powers, wants, habits, and possessions," utilise the device of the " Fictitious Mean."

[2] It is interesting to notice that when money remuneration is contrasted with " real " remuneration, the contrast is pre-eminently between objective things ; when money costs are contrasted with " real " costs, the contrast is pre-eminently between objective and subjective things.

satisfaction ; it is represented by the area left over when the law of diminishing utility is illustrated by a continuous descending curve and when a line is drawn, parallel to the base, from any point on the curve. If the above view had been held it is extremely improbable that a law of diminishing utility would ever have been formulated by economists for, clearly, the only justification for the law, other than pure assumption, and especially for its being illustrated by a continuous descending curve, is that it is a deduction from the objective fact that if an individual, with a given amount of money, the whole of which he is utilising in buying a selection of commodities and services, is to buy additional quantities of any commodity or service, the price per unit must fall.[1] If the cheapening of a commodity or service had suggested the notion of a surplus, it would have been sought and found, not in the form of utility or satisfaction, but in the larger or more appropriate amount of commodities and services which a given amount of money would purchase. What, after all, does the law of diminishing utility mean other than that the total utility of a commodity or service to an individual increases at a diminishing rate as he obtains more of the commodity or service, something which, if it is thought advisable so to illustrate it, is sufficiently illustrated by a continuous ascending curve? Indeed, one is almost tempted to say that, if this form of curve alone had been used, and not also a continuous descending curve, the suggestion that a surplus of utility or satisfaction was being obtained, which the amount of money paid for a commodity or service did not account for, might have seemed less plausible. In any case, for the economist to illustrate utility by any form of curve is quite gratuitous and, in the result, is much more likely to delude than to enlighten.[2]

On the other hand, seeing that it has an objective basis, it is not inconsistent with the above view to speak of a law of diminishing demand prices and, maybe, with due qualifications, illustrate it by a continuous descending curve. Thus, emphasis is required on

[1] If it is said that the law of diminishing utility is not a deduction from the objective fact mentioned, but that it is an explanation of why additional quantities are bought only when the price falls, the answer is that one does not usually explain the known by reference to the unknown, but the unknown by reference to the known.

[2] It may be that Dr. Marshall does not anywhere illustrate utility by a curve but everyone has not been so cautious. Moreover, it has to be recognised that Dr. Marshall's reasoning clearly implies that, for an individual, there would be an exact coincidence between a curve illustrative of diminishing demand prices and one illustrative of diminishing utility.

the fact that, at any particular time, the only point in the curve which has any significance, other than speculative, is that at which the perpendicular drawn from the base meets the curve. Moreover, if the application of the law is to an individual in relation to particular commodities or services, as there are so many commodities and services of which the individual does not buy more with every small fall of price, the statement is required that a series of disconnected points, sometimes with considerable spaces between them, is very frequently a more appropriate illustration than a continuous curve. Indeed, it should be clearly recognised that the only really valid continuous descending curve for an individual is one which relates to the money he has at his disposal and the commodities and services he purchases with it, a curve which must have the form of a rectangular hyperbola. For a large community in its relation to particular commodities or services, a continuous descending curve illustrative of the law of diminishing demand prices may, of course, be utilised with less stringent qualification as regards its continuity, though, here again, a curve with greater validity is one which relates to the money the community has at its disposal and the commodities and services purchased with it, this curve also having the form of a rectangular hyperbola.[1]

Here, perhaps, it ought to be stated that there is no suggestion that, in this discussion, there is anything which is not implicit in the marginal method of analysis, assuming that the method is applied only to those objective data with which the economist is primarily concerned. The marginal method implies the operation of the principle of substitution, and, if this principle does operate, it is clear that we cannot think of the demands of an individual for a commodity or service as demands for a number of distinct increments of them, or of his demands for commodities and services as a number of distinct demands. The operation of the principle involves our thinking of all these demands as constituting one systematic demand.[2] On the other hand, the recognition that the amount of money which an individual has at his disposal sets the limit to what he can be willing to pay for the commodities and services he

[1] In both cases, if the amount of money increased or decreased, and other things remained the same, the curves, while still retaining the same form, would, of course, have to be raised when the amount of money increased, and lowered when it decreased.

[2] It will be remembered that Dr. Marshall again went some way, but not the whole distance, in this direction when he allowed that certain commodities might be grouped together under a common demand schedule.

obtains, and to their worth to him, in terms of money, finds it basis in simple quantitative demonstration.

There are however, one or two points worthy of notice which the discussion helps to elucidate. In the first place, it will be apparent, seeing that all demands are constituents of one systematic demand, which is objectively expressed in the money which an individual has at his disposal, that a rational individual will seek to maximise the return he obtains in commodities and services for the expenditure of this money. To this end the principle of substitution will operate so that equal marginal returns, as the individual estimates these returns in terms of money, will tend to obtain in every direction. If, now, the money at the individual's disposal is reduced, say, by a tax on his income, the prices of commodities and services remaining as before, he will still seek to maximise the return he obtains for his money expenditure which, in view of its reduced amount, may mean that he will forgo certain commodities and services altogether, maybe substitute others for them, and, possibly, somewhat reduce his expenditure on all the commodities and services that entered into his selection. In a word, the principle of substitution will operate, and he will re-adjust his expenditure and choose a selection of commodities and services so that the tax will detract as little as possible from the return he formerly obtained for his larger expenditure. Suppose, however, that to raise a given amount of revenue, instead of a tax on his income, a tax is levied upon a commodity or service which enters into an individual's selection of commodities and services. In what respects will such a tax differ in its effects from a tax on his income? This question is of some interest because, in connection with the consumer's surplus conception, it has been suggested that a tax, to raise a given amount of revenue, levied on one commodity rather than on another, may involve a greater loss to the taxpayer because it would destroy a larger consumer's surplus.[1] Even if the consumer's surplus conception is accepted, assuming the principle of substitution is in

[1] The reference is, of course, to Dr. Marshall's suggestion that if " a given aggregate taxation has to be levied ruthlessly from any class it will cause less loss of consumer's surplus if levied on necessaries than if levied on comforts" because the demand for necessaries is more inelastic than the demand for comforts. *Principles of Economics*, 5th edition, p. 467. It will be understood that in this discussion, we are not concerned with the effects of a tax on commodities which are to be used in further processes of production, or with the effects according as one commodity is produced subject to increasing money costs, and another subject to decreasing money costs. It is assumed throughout that the tax imposed has no effect on the price of any commodity or service other than the one taxed.

operation, the validity of this view seems questionable. In seeking to maximise the return for his expenditure the individual concerned would, presumably, take account of any surplus on any commodity which entered into his selection of commodities and, if a tax were levied on one commodity, on which the destruction of surplus would be larger than if it were levied on another, there seems to be nothing to prevent his withdrawing money from the latter, in order to help to pay the tax on the former, and, by this re-adjustment, prevent the loss being appreciably different from if the tax had been levied on the latter.

This goes some way towards answering the question in what respects a tax, to raise a given amount of revenue, levied on a commodity or service which enters into an individual's selection of them is different in its effects from a tax on his income. Apart from the fact that, if the tax were large enough, it would drive the taxed commodity or service from the individual's selection, and so, in that sense, be evaded, the answer would seem to be that there is no appreciable difference. Throughout this discussion it has been recognised that, when an individual can obtain that selection of commodities and services which he regards as vital to his existence for a less sum than the whole of the money at his disposal, there must be some commodities or services or quantities of them for which, if it were required of him, he would, and could, pay more than he actually does pay. In the table already given, it has been shown that, if the prices of certain commodities and services were at a certain level, an individual with 40s. at his disposal would expend the whole of it in purchasing his first selection of these commodities and services. If these commodities and services became cheaper, he would embark on his second selection, this selection absorbing the first, as it were, and so on to the eighth selection. If, now, a tax were levied on a commodity or service which enters into an earlier selection, thus raising its price, it is reasonable to suppose that he would forgo commodities and services or additional quantities of commodities and services which enter into his later selections and utilise the money, thus made available, in paying the higher price occasioned by the tax. It is reasonable because his purchase of the commodities and services, or of the quantities of commodities and services, which he now forgoes was conditional on his obtaining the commodity or service, or a quantity of the commodity or service, at a price lower than it now is with the tax. Thus, the effect of the tax on the commodity or service would be to drive the individual

back to an earlier selection of commodities and services, a similar effect to that which would have followed had the tax been levied on his income.

Possibly, the position here indicated may be made somewhat clearer by a small elaboration of the table just referred to. As before, let us suppose that we are concerned with an individual who has 40s. weekly at his disposal, and that there are eight selections of commodities and services, 1 being the first selection, consisting of A commodities and services ; 1 and 2 the second selection, consisting of A and B commodities and services ; and so on, to the eighth selection, consisting of A . . . H commodities and services. As will be noticed, any selection from the first to the eighth, according to the prices which obtain, will require the whole of the 40s. which the individual has at his disposal for its purchase. Throughout the table, (*a*) refers to the amounts which he could, and, if required, would pay, rather than go without the quantities of commodities and services for which he actually pays the (*b*) amounts. For simplicity, and as the principle involved does not appear to be affected, as the differences between (*a*) and (*b*) are carried forward, they are divided so that equal amounts of money are spent, in buying larger or more appropriate quantities of those commodities and services which would be bought if prices were higher, and in buying other commodities and services. Thus, in the first selection, A commodities and services alone are bought. In the second selection a larger quantity of A commodities and services are bought, and also B commodities and services, and so to the end of the table. It may be noticed that to write A commodities and services is to imply that, even here, we are concerned with more than one thing. This is intentional. In reading the table, it may tend to clarity if A commodities and services are regarded as one thing, of which larger quantities are bought as we come down the table ; B commodities and services as another thing, of which larger quantities are bought as we come down the table, until we reach H commodities and services, when we have eight things, beyond which, at the prices which obtain, further purchasing must cease as the 40s. is exhausted.

The table requires little more explanation. The intention is to represent, in accord with the previous reasoning, how an individual, when different prices obtain, would expend the 40s. weekly he has at his disposal, and the return in commodities and services for this expenditure. It is assumed that the individual will always

seek to maximise the return for his money expenditure. If prices increase, the money at his disposal remaining the same, he will seek another maximum involving the least possible loss on his previous

	A	B	C	D	E	F	G	H	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1. (*a*)	40 0								40 0
(*b*)	15 0								15 0
2. (*a*)	12 6	12 6							25 0
(*b*)	4 0	4 0							8 0
3. (*a*)	5 8	5 8	5 8						17 0
(*b*)	1 8	1 8	1 8						5 0
4. (*a*)	3 0	3 0	3 0	3 0					12 0
(*b*)	1 0	1 0	1 0	1 0					4 0
5. (*a*)	1 $7\frac{1}{5}$	1 $7\frac{1}{5}$	1 $7\frac{1}{5}$	1 $7\frac{1}{5}$	1 $7\frac{1}{5}$				8 0
(*b*)	$7\frac{1}{5}$	$7\frac{1}{5}$	$7\frac{1}{5}$	$7\frac{1}{5}$	$7\frac{1}{5}$				3 0
6. (*a*)	10	10	10	10	10	10			5 0
(*b*)	5	5	5	5	5	5			2 6
7. (*a*)	$4\frac{2}{7}$	$4\frac{2}{7}$	$4\frac{2}{7}$	$4\frac{2}{7}$	$4\frac{2}{7}$	$4\frac{2}{7}$	$4\frac{2}{7}$		2 6
(*b*)	$2\frac{4}{7}$	$2\frac{4}{7}$	$2\frac{4}{7}$	$2\frac{4}{7}$	$2\frac{4}{7}$	$2\frac{4}{7}$	$2\frac{4}{7}$		1 6
8. (*a*)	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	1 0
(*b*)	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	1 0
Total (*b*)	23 $0\frac{19}{70}$	8 $0\frac{19}{70}$	4 $0\frac{19}{70}$	2 $4\frac{19}{70}$	1 $4\frac{19}{70}$	$9\frac{1}{14}$	$4\frac{1}{14}$	$1\frac{1}{2}$	40 0

maximum, and similarly if prices remain the same and the money at his disposal decreases. We start with a position when prices are such that the return for an expenditure of 40s. is represented by A . . . H commodities and services in the quantities comprehended in the whole table. When this is the position, suppose a tax has to be levied on either the individual's money income, or on a commodity or service which he purchases which, whether it is levied one way or the other, must raise a revenue of, say, 1s. weekly.[1] Already

[1] Evidently, there is a slight difference between these two forms of taxes in that, if the 1s. tax is on his money income, it means that the individual has now 39s. in relation to his 40s. selection of commodities and services, whereas, if the tax is levied on a commodity or service, he has 40s. in relation to the selection of commodities and services which now requires 41s. for its purchase. This difference may, however, be ignored.

it has been suggested that, unless the tax, if levied on a commodity or service, caused the taxed commodity or service to disappear from the individual's selection of them, its burden would be met in the same way as if the tax had been levied on the individual's money income. If this is the case it follows that, so far as the individual is concerned, one form of tax will be neither better nor worse than the other.

Thus, if the 1s. tax were levied on the individual's money income, a glance at the above table will show that, in order to pay the tax, the individual would forgo H commodity or service altogether, and those quantities of A . . . G commodities or services for which he would pay and actually does pay 1½d. each. In other words, he would be driven back to his seventh selection of commodities or services ; all the (*a*) amounts for the remaining commodities and services would be so reduced that their totals in the last column, and the (*b*) total in the same column, would be reduced by 1s., the other (*b*) totals in the bottom line being reduced by 1½d. each.

If, on the other hand, the 1s. tax were levied on a commodity or service which enters into the individual's selection, it is clear that it could not be levied on either F, G, or H, commodity or service, without driving it from the selection and, in that sense, being evaded. If, however, the tax were levied on either A, B, C, D, or E commodity or service, it would not be thus evaded.[1] The individual would pay it, and find the means for doing so in the same way as if the tax had been levied on his money income. Again, he would be driven back to his seventh selection, and the figures in the table would require alteration so that, with the prices of all the untaxed commodities or services remaining as before, and the price of the taxed commodity or service 1s. higher, the individual's 40s. would be exhausted by his purchase of the seventh selection.

Finally, it is not suggested that there is anything novel in this conclusion. On the contrary, given the marginal method of analysis, it is a fairly obvious one, and certainly it is not inconsistent with the facts of actual life, allowing for the presence of more ragged edges than are suggested in the above table as it is constructed. How, in actual life would a rational individual meet a tax of 1s. weekly, say, on bread ? Maybe he would consume somewhat less bread, but, in addition, might he not use less sugar in his tea, spend rather less on clothing, go to the pictures less frequently, spend

[1] Actually he would substitute something else for F, G, H. With the others the tax is not so large as to impel him to substitute for them.

somewhat less on 'bus fares, save rather less, and would he not do the same if the tax had been levied on his money income ? The aim of the individual would be to maximise the return for his money expenditure and, if this maximum were reduced either by a tax on his money income, or by a tax on a commodity or service he purchases, he would lose least by readjusting along the whole range of his margins.

G. W. Daniels

MUNICIPAL FINANCE

SHOULD THE MANCHESTER CITY COUNCIL SPEND OR SAVE?

When it became clear that the financial and industrial depression was different from pre-war cyclical depressions of trade and showed no signs of curing itself, a policy of large scale spending of public funds to provide employment on work of national and municipal importance was advocated by two of the political parties. The arguments were based largely on those advanced by the authors of the Minority Report of the Poor Law Commission, and seemed conclusive, at least to those who neither objected to what might be called "socialist enterprises," nor pinned their hope of economic recovery exclusively to a policy of tariffs. The contention was, that the making of roads, the building of schools and public buildings and the provision of equipment of a like character in a period of low prices would not only provide employment at standard rates—leading in turn to a higher level of purchasing power than would be possible were this section of the community to be dependent upon unemployment benefit or Poor Law relief—but would also provide in advance for vital public needs at a time when private enterprise failed to function normally.

If there was a flaw in this line of reasoning it was never convincingly exposed. Even the Treasury circular which was issued to combat it failed, largely, perhaps, because the Treasury is always suspected, rightly or wrongly, of being opposed to any expenditure of public funds, and because even Conservative governments claimed to have spent large amounts in providing employment.

This policy of expenditure, adopted by the late Labour government, not unnaturally, had its effect direct and indirect upon the actions of local authorities.

Some months before the conditions of the world crisis were clearly recognised to be having their effect upon our monetary stability the position in Manchester was giving rise to anxiety. The deep depression which had hung over the cotton industry for so long showed no signs of lifting, and, indeed, deepened with the falling off in world trade. Since the rateable value of Manchester has always been high, its level of rates compared, and still compare, favourably

with those of other cities, but an increase was now in prospect, and each department of the corporation was contemplating an extension of its work. The City Council therefore appointed a special committee of seven members to examine the expenditure of all the municipal departments together with the proposals submitted under a five-year programme, with a view to ascertaining what economies were possible without reducing the efficiency of the essential services. The first report of the committee was adopted by the Council in July, 1931, and the second in January of this year. On a forecasted capital expenditure over the years 1931 to 1935 of £12,800,000, the savings amount to £2,665,000. The reductions effected on revenue account, apart from the savings in interest and sinking fund consequent upon the savings on capital, are almost entirely due to reductions in salaries and in scales of out-relief. As a result there should be a saving to the rates in the current year of 10d., and in the year 1935–36 of 1s. 8d. The saving of this year is, however, more than offset by the expenditure consequent upon the growing number of people claiming out-relief, and by the fall in the rateable value of the city.

The adoption of this policy means that the increase in rates is to be limited at the cost not only of abandoning the policy of anticipating municipal needs, but of neglecting to allow for natural expansion, and of reducing the purchasing power of teachers, police, municipal officials, and people in receipt of out-relief. A halt in expenditure has been called, and the provision of projected new roads, schools, libraries, swimming baths, and the like is to be deferred. Houses alone and the development necessary for them are to be exempted from this postponement.

In reducing the salaries of teachers and police, strictly limiting capital expenditure on new schools to those already contracted for, those necessitated by housing development, and those on the " black list," and in other curtailments, the government has forced the major part of this policy upon local authorities. These measures were clearly devised for the purpose of balancing the national budget, a different problem from that of municipal expenditure. It would have been open to an authority to pursue a policy of capital expenditure, if it thought it wise, so long as it was prepared to burden the rates with the whole expense, and it is doubtful if the Ministry of Health would have forced Manchester, or any authority, to reduce its scale of out-relief until the position became serious enough to warrant supersession of the elected body by commissioners,

as was done in several places a few years ago. But Manchester had started upon the policy of restriction of expenditure before the September crisis and would not wish to escape responsibility for her action. Was the City Council right or wrong? Is there a limit to the policy of spending public money raised by rates and taxes, or is it the only way of avoiding complete stagnation? Should it be pursued regardless of the burden of the rates on the home and business, and whether rateable value is increasing or decreasing?

Obviously it must stop short of lack of confidence. If, nationally, we had not made drastic economies when the crisis was upon us, it is believed that we should have lost the confidence of foreign investors and even of our own people, and if the large public that invests in the Manchester municipal loan were to lose confidence in the city's ability to pay, it would be clear—but rather too late—that the useful limits of the policy had been reached. But short of that warning against catastrophe, what guide can economists give to perplexed City Councillors? Whatever the cause of the stagnation we seek to remedy there would be general agreement that the productive abilities of the world have, temporarily at any rate, outstripped its capacity to consume. But there is no agreement as to the way in which the balance can be re-dressed, either as to the necessity for restoring confidence, or as to the means by which it can be restored.

The argument that it pays the municipality to employ a man rather than to maintain him on out-relief, can be met by pointing out the undeniable fact that the latter course costs the ratepayer less, and that desirable though the product of the man's work might be, it might also be in the category of a luxury that for the time being cannot be afforded. It can also be pointed out that money saved to the ratepayer is not necessarily withdrawn from circulation as the ratepayer has so much more to spend on himself and on his business. There are many ratepayers in the city to-day whose children are going short of some of the necessities of life because of the burden of rates. Spending by the ratepayer is surely as efficacious in causing a demand for goods and, therefore, further employment as spending by the unemployed?

Most ratepayers, however, are better off financially than the man who will be unemployed if work is stopped. If they have to pay 10d. in the £ less, what will they do with the money? Presumably if they spend it on anything—especially anything manufactured in this country—it will give employment, although

if they spend it on beer, it is likely to be employment in Burton-on-Trent rather than in Manchester. But then presumably those given employment at the expense of the rates might, and probably would, spend a part of their wages on beer. It is naturally a tempting thought to City Councillors that expenditure by them is likely to be more consistent with the public interest than the expenditure of the same amount of money by thousands of individual ratepayers. It is, however, hardly a point of view that appeals to the ratepayers themselves, or that can be justified by the more orthodox economic considerations.

But the ratepayers might not spend it at all; they might save it. One school of thought preaches the doctrine that saving, or rather non-spending, is wrong during the present crisis. Yet it is just in a period of uncertainty that prudence suggests putting aside any surplus against an even rainier day than the present. It is true that the practice of many Public Assistance authorities is — perhaps unconsciously — re-enforcing this precept, and encouraging the spendthrift by taking into account in the assessment of need for transitional benefit any savings that the applicant may have accumulated. "Let us eat and drink for to-morrow we die," is, in fact, becoming a respectable principle, and the man who exercises the old-fashioned virtues of self-control and thrift, is in danger of being looked upon as a shirker in the hour of his country's need. What effect this topsy-turvydom of precept will have upon the younger generation who will be in control of the purchasing power of the world when provision of capital may again be necessary, it is impossible to say. Each year by means of the school savings banks a large sum is accumulated in Manchester. This money is transferred to the Manchester and Salford District Savings Bank, which reported an increase in its total deposits for the last year. Should these school banks be closed during the crisis and the children encouraged to spend any extra pennies and half-pennies they can extract from their parents on going to the pictures or on buying sweets?

But are we really forced on to the horns of such a dilemma or is it still possible to combine patriotic action with thrift? Does the solution depend upon what is done with savings? For instance, if savings are invested in the Manchester Corporation loan where the amount raised from time to time is conditioned by the amount required, the money will be spent. If on the other hand the savings are left on deposit in the Bank, do they thus become in fact if not

in name " frozen credits " ? The question is of more than academic interest, for if conditions get worse there may be a demand for greater cuts in municipal expenditure next year. So far Manchester is able to say that she is maintaining her existing services, but has put a stop to expansion for the next few years. Some local authorities are definitely reducing their standard of services, and it must always be remembered that, in spite of the ominous symptoms of a decline in the rateable value, Manchester is still a rich city. She was the only one of the big cities—apart from London—that benefited by the deficiency grant paid until this year by the Board of Education to those authorities whose product of a penny rate was high enough to penalise them under the grant formula. A re-valuation throughout the whole country is due in 1934 and the result of that, in Manchester, will probably have more effect upon the policy to be pursued by the City Council, than even a unanimous opinion from the economists.

Even in this time of serious depression when owing to the cost of out-relief, the rates have been increased by 1s. to 15s. 6d., the City Council refused to alter the decision it took three years ago —when the rates were 14s.—to raise a special 3d. rate for the payment of certain capital sums and for the general reduction of debt. The money has been spent upon such durable objects as public conveniences, alterations to hospitals, dressing rooms in the parks, etc., and the balance of over £92,000 will by the end of this year have gone in general debt reduction. To force the present generation of ratepayers to provide, not only for themselves, but gratuitously for their children and grandchildren, is supported in the City Council by a curious combination of Conservatives and Socialists. The latter denounce all interest as immoral, all who lend money as " blood-suckers." Horrified at the realisation that interest and sinking fund amounts in the end to more than the original sum borrowed—entirely disregarding the difference between present and deferred value—they seem incapable of grasping the fact that £100 invested by the ratepayer behaves in exactly the same way as if it were borrowed by the Corporation, and that the hated capitalist system has not conceived a special grudge against money borrowed by municipalities. The Conservative support of the policy " pay as you go " is much more understandable, for if carried out fully it involves the corollary " if you cannot pay you must not go," and it is much more attractive to the Conservative mind to spend money on liquidating debt than on education, public health

and other social services, where capital expenditure necessarily involves an increase in maintenance charges. Extra schools mean extra teachers, an increase in hospital beds means more doctors and nurses. It is not without significance that the London County Council, a preponderantly Conservative body, this year reduced its expenditure on education, but increased up to £800,000 the amount of capital expenditure to be paid out of rates. Whatever be the pros and cons of the general question of paying for items of capital expenditure out of the rate for the year, is it right at a time like this to raise £92,000 for the general reduction of debt? If it were left in the pockets of the ratepayers they would certainly spend some of it. If it is used to liquidate debt the chances are that the recipients will re-invest it.

Every policy pursued energetically brings its reaction. When the reaction against restriction of expenditure will come and how it will be guided depends largely upon economists through their influence upon the leaders of public thought. City councillors and even officials are almost bound to deal with immediate situations, and have neither the time nor the equipment, to analyse scientifically the long range effect of their policies. It is so easy to make a plausible speech for or against a policy of public expenditure, so easy to be swayed by the results of elections, so difficult to weigh up the respective arguments, and to strike a just middle course. Have we, by chance, fallen upon a *via media* in Manchester or do we err on one side or the other, and if so, on which?

SHENA D. SIMON

HIGH WAGES AND INTERNATIONAL PRICES

Dogmatism and lack of realism were the chief faults of the theories of wages as propounded by the classical economists. Unconventional modern writers like Mr. Dobb and Mr. Rowe have done a good deal to remedy the state of affairs that had prevailed in the theory of distribution till lately. The contribution made by both writers is in the direction of a destructive criticism of the older marginal productivity theory as being utterly insufficient for the purpose of accounting for the actual settlement of wages as it takes place in a modern industrial community. While Mr. Dobb's main thesis is that wages are indeterminate over a wide range and within wide limits set by subsistence on the one hand and the whole of the national dividend minus the necessary flow of savings that should go to support new capital investments on the other and that the customary standard of life of the worker as well as the employer and their relative bargaining power are the main factors in determining the wage level at any time, Mr. Rowe's contention, which he has statistically substantiated, is that the payment of higher wages puts the employer on his mettle making him set his own house in order, and thus a high wage level sustains itself. Mr. Keynes, in The Political Quarterly of January, 1930, reviewed these new developments in the wage theories. While he was not altogether out of sympathy with them, he pointed out some practical difficulties in the way caused by the international mobility of capital and enterprise. He, therefore, as a practical proposition suggested that the better method to ameliorate the life of the working classes was to adopt a policy of high taxation mainly of profits, and to confer social benefits through the agency of public expenditure.

This view has not gone unchallenged and in a recent issue of The Manchester School,[1] Signor Carlo Pagni, in an article entitled *High Wages or High Taxation?*, maintains that the Trade Union policy of raising wages artificially is on the right lines. As in that article Signor Pagni categorically denies practically every argument of Mr. Keynes, it has become necessary to consider, firstly, whether the

[1] Vol. II., No. 2 (1931).

difficulties pointed out by Mr. Keynes were merely imaginary and secondly, whether the alternative policy, proposed by him, *viz.*, higher taxation, is to be lightly set aside.

Mr. Keynes was evidently speaking of the international position of Great Britain in 1930, when it was on the gold standard. By going off the gold standard Great Britain has now made possible a better alignment between the domestic real wages and foreign real wages. This does not mean that the case for substituting higher taxation for artificially high wages is in any way weakened. The exchange situation may well be a temporary safeguard ; what with the self-equilibrating effects of a low exchange and with the new advent of protectionism, the foreign exchanges must sooner or later rise. In that event the temporary correction, which has been accomplished by the low exchange in raising the international sterling prices and thus reducing the wages proportion of the British industrial costs relatively to foreign costs, will prove to be a short-lived benefit. However, although the immediate reason for urging a policy of higher taxation as an alternative to a high wage policy may be wanting, it must appear that it is a perennial problem for a country like Great Britain, whose money market provides unusual facilities for the extreme fluidity of capital resources.

We may, however, consider the problem theoretically and on its own merits. In assessing the relative advantages of high wages and high taxation, we have to bear in mind that this is an enquiry into the incidence and effects of artificially high wages and the incidence and effects of higher taxation. For simplicity of discussion, we shall assume that the excess of new taxation contemplated is nearly equal to the reduction of wages that will be effected by abandoning the artificial extent of the high wages whatever that might be. Secondly, we have to remember that it is a choice between two evils or, if you please, between two goods, and we must avoid speaking as if the higher taxation proposed was additional to the existing level of high wages. It is clear that the social benefits conferred by a substitution of higher taxation for high wages will not be of the same kind as obtained by the private expenditure of the wages ; but whether they will be a greater or a smaller good than the latter would be a separate question.

Before we come to the main issues involved, we shall first weed out some preliminary arguments from our way. Signor Pagni says that a higher level of taxation would entail additional costs of collection. This contention, though it would be appropriate when

speaking of a complete overhaul of the taxation system, is evidently of the nature of exaggeration when only changes in the scales of certain taxes, mainly direct and personal, to be effected through the existing machinery of finance are under discussion.

Secondly, Signor Pagni contends that taxation of incomes, no less than high wages, tends to cause an outflow of capital resources, intended for the evasion of home taxation. But this is obviously a question of taxing technique. If the simple British rule is followed that not only income from home but that from foreign investments would be liable to the tax as well, the tendency for capital to flow out for the reason of a high income tax is capable of being checked.

Signor Pagni is in a less vulnerable position when he takes his stand on the theory that artificially high wages have a " selective " influence on enterprise, weeding out the inefficient business man and thus making for progress. This, he says, results in higher productivity all round and consequently lowers the wage cost per unit of production. With this line of thinking we have now been familiarised by the classical presentation of it by Mr. Rowe in his *Wages in Theory and Practice*. Mr. Rowe has brought his rich statistical experience to bear on the issue and has made out a case for such a possibility. Signor Pagni himself mentions the case of the American experiments in a policy of high wages. He cannot, however, be too sure as to which is cause and which is effect in the American precedents of high wages being associated with more efficient management. The causal sequence he seeks to establish—high wages, development of scientific methods, reduction of costs per unit of output—is not so clear. It may be as reasonable to say that the American adherents of scientific management can pay high wages, because they have pursued those methods. There is no clear evidence, as Signor Pagni admits in a footnote, to prove that it was trade union pressure that caused or induced or compelled the American industrialists " to set their house in order." The causal sequence between high wages and greater activity on the part of the industrialist has not been established. That the two are associated there can be no doubt. That, moreover, in a closed system it may be even possible for the trade unions to raise wages to Mr. Dobb's theoretical maximum of the national income minus necessary savings and that it may be even possible for them to reduce the employer's standard of life and goad him to feverish activity, may be also conceded for the sake of argument. About these theoretical possibilities we have nothing to say. The question that was raised

by Mr. Keynes was about their translation into realities in an open, international system. Behind the impulse to rationalise there can be numerous other factors of importance, like the psychology of the business man, current ideas as to management and rationalisation, state encouragement for industrial amalgamation and large scale operation ; but all these are less of the nature of coercion or duress and more of understanding co-operation. The trade union policy, on the other hand, of high wages at any cost and regardless of efficiency wages as they are paid abroad must clearly drive the employer to seek some loopholes for escaping from any such tyranny. In so far as he does not seek them the investor will. Such an important loophole is provided by the easier method of foreign investment.

Signor Pagni says, " Who would say . . . that American industries are not a good field for investment because of their high wages ? " This interrogation is no answer to the question at issue. It would be a very crude notion to suppose that it is the high wages per worker that causes any outflow of capital resources to places where their reward is higher. It should be clear that not high wages per workman, but high wages per unit of production are here under consideration. Wages can be high in one country and low in another because the efficiency is high and low respectively. In such a case there would not be a tendency for capital to flow out. America is not a bad field for investment because the high wages are high efficiency wages and not artificially high wages.

The fact is indubitable that the wage level can be high in some and low in other countries relatively to the efficiency of the worker. Nor need the concept of efficiency involve the notion of marginal productivity, which we may leave aside for the moment as a highly controversial subject. To go a little further, it may even be said that it is not necessary to investigate whether, in fact, wages are artificially high in a given country ; it may well be the other way round, *i.e.*, wages may be artificially low in other countries, due to a lack of organisation among the workers in those countries. Wherever this is the case, as it is in the backward countries of the East and of South America, capital will tend to flow to those parts of the world where its reward is likely to be high. It may be a kind of *deus ex machina*, this flow of capital, a necessary development of the nature of economic equilibrium ; it may cause the wage level in those countries to rise due to competitive bidding by the entrepreneurs. This, however, presupposes a free and competitive labour market, a condition which might not be obtained ; employers, in tacit agreement

as they always are to keep wages low, might agree not to bid against each other. To compel them to pay adequate wages, labour itself will have to be organised. All this will happen in the long run. In the meantime the harm will have been done. Home investment will have languished and all the industrial difficulties at home will have been intensified. The evil effects of the transference of capital abroad are too well known to be repeated.

These international limitations of a national wage policy are not a " re-formulation " of the Iron Law of Wages, as Signor Pagni calls them. They only point out the practical difficulties in the way of carrying out wage reforms such as are justified on theoretical grounds by Messrs. Dobb and Rowe. It is no defence of the older theories of wages to indicate these unpleasant realities ; nor is it a reflection on the intrinsic value of the new theories. It is perhaps possible to alter the customary standard of life of the employers as much as that of the wage-earners, by a concerted international wage policy. As regards the outflow of capital resources themselves, there may be more causes underlying such an outflow than merely artificially high wages ; but it cannot be denied that anything that tends to reduce the reward of capital in any given area will set in motion the forces of transference and substitution. The principle of comparative costs is ever operating in an international system ; its neglect is bound to react unfavourably on employment and trade within the area.

Signor Pagni's treatment of the alternative of higher taxation is very perfunctory and even misleading. " Efficient or inefficient, all employers would be taxed in proportion to their profits ; they would feel no longer the incentive to alleviate this burden by means of productive improvements." In this passage, Signor Pagni makes the assumption that profits will be taxed proportionately, which is not actually the case. Taxation will, of course, be progressive and the employer who is not making any profits will not be taxed at all ; so he will not dismiss his workmen. On the other hand, the employers who are making any profits will, appropriately, bear the burden, but not the whole burden of the new addition to the taxation proposed, which will fall on them as well as on the richer sections of the non-employer class. Thus taxation, unlike high wages, will not discriminate against the employment of labour. Signor Pagni's second contention is that prices, especially of primary commodities, will rise as a result of the higher taxation, and if at the same time wages are curtailed, demand for those commodities will fall and

economic advancement will be retarded. His view that the prices of primary commodities will rise is definitely misleading, if he is speaking of a high wage country like Great Britain ; for, this country depends for the supply of primary commodities on foreign sources. The prices of primary commodities need not, therefore, rise at all. As regards the demand for goods or services, which are really relevant to economic advancement, on which Signor Pagni is so keen, we must not forget that the extra taxation collected will be expended on goods and services of various kinds by the Government.

Signor Pagni's further assertion that " the authoritarian re-distribution of income as proposed by Mr. Keynes, would then have the effect of increasing—with much fiscal friction—domestic prices, displacing the scale of comparative costs to the detriment of the country and, therefore, contracting the *débouchés* of domestic production," must be a mere flourish of the pen. Even admitting that the whole of the new additional taxation would enter into costs, what ground is there to suppose that it would *increase* the domestic prices, if the new taxation is substitutive and not additive, as Pigou would say, to high wages ? Signor Pagni's fears about displacing the scale of comparative costs may well be disregarded if the displacement is in the downward direction ; if it is not possible to reduce comparative costs by the substitution of higher taxation for artificially high wages, Signor Pagni has a lot to think of already in the disparity of the domestic costs relative to foreign costs and international prices.

Signor Pagni's hope that high wages may act " as a selective agency among the workers " (" Those who are more skilled, more industrious, more intelligent, will be better paid than those who are less"), cannot evidently be realised, while the rule of the Standard prevails in the trade union wage policy.[1] As regards the psychological reasons, of political parasitism and favouritism, that Signor Pagni adduces against the adoption of public finance as an engine for labour reform, we can just as well speak of the virtues of these defects, as the French call them, *viz.*, that labour would learn more and more to exercise its political power and thus legitimately enlarge the scope of the state's part in social welfare in those directions which have been so far jealously regarded by the trade unions as their own hegemony.

[1] We are speaking here of time wages ; as to piece wages, there is no question of the " selective agency " working itself out.

Signor Pagni does not, of course, admit the same chastening effect of a selective influence, which high wages have on the employer, for higher taxation and yet he contends that "it is not true to say that income tax does not affect the cost of production, whereas high wages do," if we are speaking of a dynamic state, in which the burden of income tax and high wages will be identical. Now the whole question as to whether a tax on profits does or does not enter into costs is enveloped in confusion and controversy. Theoretically profits are of a dual nature, the legitimate and expected reward for services rendered, and the windfall. Now the taxation of profits scarcely distinguishes this double nature of profits. Considered dynamically, however, there may be as much sense in the contention that not only the taxation of profits but the whole of taxation, indeed, the whole of the cost of maintaining a country enters into its productional costs. Thus regarded, the presentation of the problem makes for little clarity but only for despair. We must, therefore, limit our view to the proximate rather than to the ultimate aspects of the phenomenon of industrial costings. This would enable us to envisage the process of costing more clearly. For this reason, I am sceptic about the use of the dynamic method in analysing incidence of taxation or wages on prices, and believe that the static method would yield better results.

Apart from these arguments, there is no reason to suppose that the taxation of the differential element or the windfall element in profits enters the costs of production any more than those elements themselves. The chief merit of the taxation method is this, that it takes off part of the differential gains accruing to the employers and hence does not affect employment; while the chief defect of the wages method is that it penalises the weak and the strong alike and drives the marginal firms out of the industrial field. High wages are of the nature of a direct tax on employment and discriminate against the use of labour. High taxation, on the other hand, can be spread over the whole community and through its agency employers and non-employers alike can be made to contribute to the provision of many desirable amenities for the worker.

Mr. Keynes has enumerated the various things that the State can do for the workers, extension of social insurance, better scales of pensions, expenditure on health, recreation and education, and facilities for travel, housing, and family allowances. Many more items, social and developmental, can be added to the list. State provision of such amenities is to be preferred for intrinsic reasons

also. High wages confer an accession of purchasing power on the able and efficient section of the community. They have little or no connection with the lives of the weak, the disabled, the aged, and the pauperised sections of the working classes. The well-being of these ought to be in the care of the state to a greater extent than it has so far been. As regards the earning sections of the working class, there can be a divergence of opinion as to whether the state can more usefully spend for them the tail-ends of their wages, than they themselves can do. Advocates for a complete freedom as to spending incomes will say that that part of workmen's wages, which is intended to be reduced and made good by state expenditure, could be productive of greater satisfaction to the worker than the latter can yield. I, for one, hold that the marginal expenditure of that section of the working classes may be improved considerably by the substitution of state expenditure, although here it will depend more on the way and the direction in which the state expends the proceeds of the additional taxation.

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AN ENQUIRY INTO THE EMPLOYMENT OF JUVENILES IN LANCASHIRE

All investigators of the acute labour problems which confront the urban population of Lancashire will be aware of the almost entire absence of statistical information as to the numbers of children who, on leaving school and becoming available for employment for the first time, are entering from year to year the different industries and occupations carried on in the county. Similarly, little is known about the industrial distribution of employed juveniles and the volume and percentage rate of unemployment of juveniles in the two years which elapse between the age of leaving elementary school and the age of entry into Unemployment Insurance, *i.e.*, 14+ years to 16 years. If the school-leaving age were raised, and the age of entry into Unemployment Insurance lowered to 15 years, this period would be effectively bridged and a serious gap in existing statistics would be removed.[1] But unless and until such changes are made, this inadequacy of data is regrettable because it hampers the efforts of those who are attempting to throw light upon the subject of the present and probable future surplus of labour in the depressed staple industries.

In the course of the Industrial Survey conducted during 1931 by the Department of Economics and Commerce of the University of Manchester, the Juvenile Employment Bureaux and the Juvenile Employment Advisory Committees in operation in industrial Lancashire were consulted on this point, and it was found that no more than eight of them were able to furnish a detailed industrial and occupational classification of new entrants into industry in their areas during the post-war years. Moreover, the years to which the particulars applied varied from one area to another, and different classifications of industries or occupations and different methods of collecting the information were employed in the several areas. Above all, the available material referred only to the nature of the employment of children either immediately or within two or three

[1] But see Ministry of Labour: Memorandum on the Shortage, Surplus, and Re-distribution of Juvenile Labour during the years 1928 to 1933. 1929, Cmd. 3327.

months after leaving school, and did not extend to subsequent age-levels prior to attaining the age of 16 years, so that it was not possible to study industrial distribution and the incidence of unemployment in the course of the fifteenth and sixteenth years.

It is hardly necessary to stress the importance of these years in the working life of the wage-earner or to enumerate the trends in employment and unemployment which, in the public interest, it is desirable should be kept under close observation. An illustration from the cotton industry in post-war years will be sufficient comment. It is known that in certain of the principal cotton spinning and weaving centres—*e.g.*, Oldham and Chadderton, Bolton, and Blackburn—in which even before 1930 there was a very large surplus of adult cotton workers of all ages, the rate of entry of juveniles into the industry on leaving school showed only slight signs of abating up to 1929–30 and in most years about one-half of the total leaving school went into the cotton industry. There is no doubt that the continued recruitment of juveniles for an already overcrowded industry has aggravated the problem of surplus labour, particularly amongst young adults whose opportunities of acquiring industrial skill and experience have been limited through intermittent and under-employment. These facts seem to constitute at least a *prima facie* case for seeking to improve our knowledge of the size and nature of the labour force in the industry up to the age of 16 years, whether the object be merely to lay bare the true position to those seeking to enter cotton or the wider one of ultimately exercising control over the number of new entrants as a means of relieving the pressure of unemployment upon older workpeople.

Such considerations as these had led the social research section of the Department of Economics and Commerce of Manchester University to devote special attention to the question of employment and unemployment of juveniles below 16 years of age, and finally it became possible for this section to collaborate with the Director of Education for the Lancashire County Council in an enquiry relating to all children who left schools under his authority between August 1st, 1930, and July 31st, 1931.

The schools which are under the authority of the Lancashire County Council may be divided into three groups:

(*a*) Elementary schools situated within the county, excluding those local administration areas which are autonomous for

elementary education, viz., — the county boroughs, the municipal boroughs, and certain urban districts.[1]

(*b*) Secondary schools in all local administration areas, excluding the county boroughs.

(*c*) Junior Technical schools in all local administration areas, excluding the county boroughs.

The enquiry was confined to schools in these groups which are situated in the Manchester University Industrial Survey Region[2], and so did not extend to county schools in West Lancashire and the Liverpool area or in the districts which lie to the north of Lancaster. Particular interest attaches to the results of the enquiry by reason of the fact that it covered a number of areas in which agriculture is the predominant industry, and, since this industry is not covered by the Unemployment Insurance Scheme, very little is yet known of the employment conditions prevailing within it. Further, the area dealt with contains many of the smaller manufacturing centres which are not usually given special attention in a survey of Lancashire's industrial activities.

The method employed was to enlist the co-operation of the teaching staffs of each school in trying to ascertain the industry and occupation (if any) in which each child was employed at the end of two months after the date of leaving school and to determine what proportion of those leaving school was not in employment at the end of that period. Considerable care was exercised in organising the enquiry to secure a reasonably reliable industrial classification of those in employment. Firstly, the instructions given to each investigator emphasised and explained the vital distinction between the expressions "industry," "trade," or "service" on the one hand and "occupation" on the other hand.[3] Secondly, the investigators in making a return of the industry or service entered by each child were in possession of a list of industries and services which adhered very closely to the Ministry of Labour's classified list of industry groups.[4]

[1]The autonomous urban districts are Chadderton, Farnworth, Hindley, Ince-in-Makerfield, Radcliffe, Stretford, and Swinton and Pendlebury.

[2]Within Lancashire, this Region comprises the territory which lies to the south of a line drawn eastwards from Lancaster to the county boundary, and to the east of a line following the coast from Lancaster to Preston and thence through St. Helens to Widnes.

[3]A note was added asking that information as to occupations should be as full as possible.

[4]The list included also "agriculture" and "domestic service" which are not covered by the Ministry's classification. Further, the "distributive trades" were divided up into "wholesale trading" and "retail trading."

The enquiry was carried through between mid-October and mid-November, 1931, and affected the following numbers of children who left school between August 1st, 1930, and July 31st, 1931 :

Elementary Schools	Boys	4,287
	Girls	4,303
Secondary Schools	Boys	1,096
	Girls	847
Junior Technical Schools ...	Boys	191
	Girls	—
		10,724[1]

EMPLOYMENT.

The following general table indicates for each group of schools the numbers and the percentages of children in employment at the end of two months after leaving school, the remainder being classified under the heads—" unemployed but seeking work," " further education," " left district," " staying at home," and " not known."[2]

TABLE I

General Classification of Children leaving Public Elementary, Secondary, and Junior Technical Schools.

Classification.	Elementary.				Secondary.				Junior Technical Schools (Boys only).	
	Boys.		Girls.		Boys		Girls.			
	Actual	%	Actual	%	Actual	%	Actual	%	Actual	%
Employed	3,423	79·8	2,843	66·1	631	57·6	240	28·3	154	80·6
Unemployed but seeking work	784	18·3	849	19·7	133	12·1	104	12·3	31	16·3
Staying at Home[3]	41	1·0	520	12·1	2	0·2	144	17·0	—	—
FurtherEducation	23	0·5	72	1·7	279	25·5	326	38·5	4	2·1
Left District[4] ...	11	0·3	18	0·4	34	3·1	23	2·7	2	1·0
Not Known ...	5	0·1	1	—	17	1·5	10	1·2	—	—
Total	4,287	100·0	4,303	100·0	1,096	100·0	847	100·0	191	100·0

[1]In the year 1929-30, the numbers of children leaving public elementary and secondary schools in Lancashire were : Elementary—76,565 ; Secondary—9,117. Corresponding numbers for the Manchester University Survey Region in 1930 were : Elementary—Boys : 28,195 ; Girls : 27,532.

[2]It will be noticed that the numbers of children concerning whom particulars could not be obtained were almost negligible.

[3]Girls recorded as staying at home for farm work were classified as " employed " in agriculture.

[4]It is likely that some who were recorded as " left district " will be continuing their education elsewhere, so that this group may overlap with " further education."

It was to be expected that the proportion of children seeking employment on leaving school would be higher in the case of elementary and junior technical school children than in the case of secondary school children, and in all schools higher for boys than for girls. The figures show that amongst boys, 98 per cent. of those leaving elementary schools, and 97 per cent. of those leaving junior technical schools, but only 70 per cent. of those leaving secondary schools, were available for employment, the corresponding proportions for girls being 86 per cent. (elementary schools) and 41 per cent. (secondary schools). It is probable, however, that the proportion " staying at home " amongst both classes of girls was higher than it would have been if paid employment had been more readily obtainable. It would be interesting to know whether the difficulty of finding work has had the effect, in the case of secondary school children, of inducing greater numbers to continue their education beyond the normal leaving age, but the results of this enquiry throw no light upon this point.

The characteristics of the industrial distribution of those finding work and the nature of the occupations entered by them may most conveniently be examined separately for each class leaving school. In interpreting the statistics on these questions it is necessary to bear in mind that the employment in which a child is found at the end of only two months after leaving school is often purely transitory, and consequently the figures may weight too heavily those occupations in which the rate of " turnover " of juvenile labour is high, *e.g.*, some retail trading occupations.

Elementary Schools.

The industries and services which absorbed more than 2 per cent. of the total leaving elementary schools in the area surveyed are shown in Table II, which gives the number of boy and girl entrants into each principal industry, and the proportion which that number bears to the total leaving school and to the total employed.[1]

[1] Complete details given in Appendix.

TABLE II

Elementary Schools.

Entrants into Principal Industries and Services.

Industry or Service.	Number of Entrants.	Number of Entrants as Percentage of Total.	Number of Entrants as a Percentage of Total Employed.
Boys.		%	%
Retail Trading	681	15·9	19·9
Cotton	600	14·0	17·5
Agriculture	595	13·9	17·4
Coal Mining	293	6·8	8·6
Building	152	3·5	4·4
General Engineering...	103	2·4	3·0
Iron and Steel	102	2·4	3·0
Total (7 Industries) ...	2,526	58·9	73·8
Total (All Industries and Services) ...	3,423	79·8	100·0
Girls.		%	%
Cotton	1,201	27·9	42·2
Clothing[1]	357	8·3	12·6
Domestic Service ...	264	6·1	9·3
Retail Trading	254	5·9	8·9
Bread Baking	73		
Sugar Confectionery...	73	4·3	6·4
Other Food Industries	37		
Agriculture[2]	102	2·3	3·6
Total (8 Industries) ...	2,361	54·8	83·0
Total (All Industries and Services) ...	2,843	66·1	100·0

The leading industries specified took up in the case of boys 73·8 per cent., and in the case of girls 83·0 per cent., of the total employed. Taking boys and girls together, cotton, retail trading, and agriculture were the predominant sources of employment, clothing and domestic service for girls and coal mining for boys also being important.

Several noteworthy conclusions emerge from a study of the geographical distribution within the area of the entrants into the cotton industry and into agriculture, and of the relative importance of agriculture and other industries in the different parts of the area. For this purpose, in compiling the results of the enquiry,

[1] "Clothing" includes all the Ministry of Labour "Clothing Trades" except "Boot, Shoe, Slipper, and Clog Trades."

[2] See above p. 32, note 3.

the area has been divided up into thirty-two sub-areas, which correspond as nearly as possible to the Local Elementary Education Areas of the Lancashire County Education Committee.[1]

The geographical distribution of *boy* recruits to agriculture may be summarised as follows. Twenty-two sub-areas each contributed at least 2 per cent. in numbers to the total entering agriculture. Many of these sub-areas[2] are, in fact, predominantly concerned with manufacturing industry which tends to overshadow the part they play in the county's agricultural activities. There are, however, six sub-areas each of which accounted for more than 5 per cent. of the total entrants, viz. :

	Per Cent.
1. Preesall U.D. and Garstang R.D.	10·6
2. Longridge U.D., Fulwood U.D., and part of Preston R.D.	9·6
3. Kirkham U.D. and part of Fylde R.D. ...	7·2
4. Haydock U.D., Newton-in-Makerfield U.D., and Warrington R.D.	5·7
5. Walton-le-Dale U.D., and parts of Preston R.D. and Chorley R.D.	5·2
6. Leyland U.D., Croston U.D., and part of Chorley R.D.	5·2

The three sub-areas first mentioned, along with a smaller sub-area (consisting of Fleetwood U.D., Thornton U.D., Poulton-le-Fylde U.D., and part of Fylde R.D.), are contiguous and together constitute broadly the Fylde agricultural region. The magnitude of agricultural employment scattered over other parts of the area surveyed is shown by the fact that only 31 per cent. of the total entrants into the industry were found in the Fylde region.[3]

[1] Two Local Elementary Education Areas are wholly, and four partly, outside the area dealt with in this enquiry.

[2] *e.g.*, 2·2 per cent of the total entrants were found in the sub-area containing the Urban Districts of Great Harwood, Rishton, Clayton-le-Moors, Church, and Oswaldtwistle.

[3] The territory in Lancashire excluded from this survey is, apart from the Liverpool area, almost wholly devoted to agriculture.

A better index of the degree of concentration upon agriculture in any sub-area is furnished by figures of the percentage of those leaving school who entered agriculture. By this test, also, it is the sub-areas which lie to the north and north-east of Preston which are most predominantly agricultural. In the following eleven sub-areas, more than 30 per cent. of the employed males had been absorbed in agricultural occupations :

District.	Total Boys Entering Agriculture.	Total Male Entrants into Agriculture as a Percentage of Total Employed Males.
1. Preesall U.D. and Garstang R.D. ...	63	81·8
2. Parts of Lancaster R.D.	8	66·7
3. Longridge U.D., Fulwood U.D., and part of Preston R.D.	57	54·3
4. Kirkham U.D. and part of Fylde R.D.	43	52·4
5. Clitheroe R.D.	14	48·3
6. Skelmersdale U.D. and part of Chorley R.D.	18	47·4
7. Blackburn R.D.	16	43·2
8. Trawden U.D., Barrowford U.D., and part of Burnley R.D.	23	39·7
9. Leyland U.D., Croston U.D., and part of Chorley R.D.	31	33·7
10. Turton U.D.	19	32·2
11. Rainford U.D., Prescot U.D., and part of Whiston R.D.	21	30·4

If the same index of industrial concentration be employed in the case of entrants into the cotton industry, the result is to show that the majority of the urban districts in the area under survey are heavily dependent upon cotton for the provision of employment for girls. The number of districts in which boys look mainly to cotton is much smaller, but still substantial. Firstly, there were no less than twenty sub-areas in which 30 per cent. or more of the total *employed* girls were found in cotton. The preponderance of this industry is so marked that a list of these districts merits presentation.

District.	Total Girls Entering Cotton.	Total Girls entering Cotton as a Percentage of:	
		Total Girls Leaving School.	Total Employed Girls.
1. Crompton U.D., Royton U.D.	93	76·9	90·3
2. Padiham U.D. and part of Burnley R.D.	51	63·0	85·0
3. Adlington U.D., Withnell U.D., and part of Chorley R.D.	64	57·7	79·0
4. Trawden U.D., Barrowford U.D., and part of Burnley R.D.	28	60·9	73·7
5. Brierfield U.D. and part of Burnley R.D.	30	52·6	73·2
6. Horwich U.D., Westhoughton U.D.	89	50·0	71·8
7. Little Lever U.D., Kearsley U.D., Little Hulton U.D., and part of Barton-upon-Irwell R.D.	100	51·8	66·2
8. Ramsbottom U.D. and part of Bury R.D. ...	33	41·3	66·0
9. Great Harwood U.D., Rishton U.D., Clayton-le-Moors U.D., Church U.D., and Oswaldtwistle U.D.	101	41·7	66·0
10. Standish with Langtree U.D., Blackrod U.D., Aspull U.D., and part of Wigan R.D.	77	42·8	63·6
11. Leyland U.D., Croston U.D., and part of Chorley U.D.	45	41·7	60·8
12. Norden U.D., Whitworth U.D., Wardle U.D., Littleborough U.D., Milnrow U.D., and part of Bury R.D.	62	34·3	54·4
13. Atherton U.D., Tyldesley-with-Shakerley U.D., and part of Leigh R.D. ...	87	32·7	54·0
14. Walton-le-Dale U.D. and parts of Preston R.D. and Chorley R.D.... ...	41	32·3	48·8
15. Skelmersdale U.D. and part of Chorley R.D. ...	16	26·7	47·1
16. Tottington U.D. and part of Bury R.D.	9	18·4	42·9
17. Turton U.D.	16	26·2	41·0
18. Worsley U.D.	29	32·2	39·7
19. Clitheroe R.D.	10	23·8	38·5
20. Longridge U.D., Fulwood U.D., and part of Preston R.D.	16	23·9	37·2

In six sub-areas, cotton accounted for more than 30 per cent. of the total *employed* boys.

District.	Total Boys Entering Cotton.	Total Boys Entering Cotton as a Percentage of: Total Boys Leaving School.	Total *Employed* Boys.
1. Crompton U.D., Royton U.D.	107	63·3	72·8
2. Brierfield U.D., and part of Burnley R.D.	28	45·2	47·5
3. Trawden U.D., Barrowford U.D., and part of Burnley R.D.	23	35·9	39·7
4. Adlington U.D., Withnell U.D., and part of Chorley R.D.	32	24·6	34·1
5. Norden U.D., Whitworth U.D., Wardle U.D., Littleborough U.D., Milnrow U.D., and part of Bury R.D.	49	26·9	34·0
6. Little Lever U.D., Kearsley U.D., Little Hulton U.D., and part of Barton-upon-Irwell R.D.	43	27·2	30·9

The position in these urban districts closely resembles that in the larger cotton centres in which in 1930 and 1931, notwithstanding the prevalence of unemployment, short-time working and other forms of under-employment, juveniles were entering the cotton industry in large numbers. In the small towns and villages even more than in the larger towns, the lack of other industries capable of providing alternative occupations has probably compelled many to enter cotton who would have preferred employment elsewhere.

Secondary Schools.

Table III indicates the principal industries and services entered by boys and girls leaving secondary schools in the area under survey, in a form which makes the statistics comparable with those relating to elementary school children in Table II.

TABLE III[1]

Secondary Schools.

Entrants into Principal Industries and Services.

Industry or Service.	Number of Entrants.	Number of Entrants as a Percentage of:	
		Total Leaving School.	Total Employed.
Boys.			
Commerce, Banking... ...	37		
National Government ...	28	15·6	26·9
Local Government	36		
Professional Service... ...	69		
Retail Trading	115	10·5	18·2
Agriculture	39	3·6	6·2
Building	33	3·0	5·2
Cotton	31	2·8	4·9
Construction and Repair of Motor Vehicles ...	30	2·7	4·8
Total (9 Industries)	418	38·2	66·2
Total (All Industries and Services)	631	57·6	100·0
Girls.			
Retail Trading	85	10·0	35·4
Commerce, Banking... ...	14		
National Government ...	8	7·8	27·5
Local Government	5		
Professional Service... ...	39		
Cotton	19	2·2	7·9
Total (6 Industries)	170	20·0	70·8
Total (All Industries and Services)	240	28·3	100·0

The types of employment principally taken up by children leaving secondary schools may differ from those afforded to juveniles' elementary schools in at least two respects—firstly, the two classes of juveniles may tend to enter totally different industries and services, or secondly, they may enter different occupations within the same industries or services. Both tendencies appear to have operated in the area surveyed in the year 1930–31. Professional occupations, which absorbed over one-quarter of the total *employed* boys and girls having a secondary education,[2] were, of course,

[1] Fuller details given in Appendix.

[2] A large proportion of those classified under the head "further education" in the case of secondary school leavers will, in due course, enter the professions *via* training colleges, universities, etc.

rarely obtained by children leaving elementary schools at the age of 14 years. The following table shows that the percentage of employed boys and girls who entered the extractive and manufacturing industries was very much higher amongst those leaving elementary than those leaving secondary schools.

		Number of Entrants into Manufacturing and Extractive Industries as percentage of:	
		Total Leaving School.	Total Employed.
Elementary Schools:	Boys	59·9	75·1
	Girls	51·8	78·4
Secondary Schools:	Boys	27·0	46·9
	Girls	8·9	31·3

A comparison of the occupational distribution of the two kinds of entrants into the cotton industry illustrates the effect of the second tendency. The following particulars relate only to boys:

	From Elementary Schools.	From Secondary Schools.
Piecer	127	
Weaver	67	5
Loom Tenter	45	
Tuber	77	
Scavenger	43	
Warehouse Boy	36	
Reacher	31	
Spinner	22	
Doffer	17	
Creeler	13	
Clerk	9	12
Cardroom Worker	6	
Errand Boy	5	
Office Boy	4	2
Overlooker	1	
Miscellaneous	58	
Learning Trade		4
"Apprentice Manufacturer"		1
Warehouseman		3
Salesman		2
"Cotton Buying"		1

A large majority of the recruits from secondary schools entered clerical, commercial, or administrative occupations in the industry, while elementary school leavers were absorbed almost wholly in manual occupations in spinning and weaving.

Junior Technical Schools.

There are only eight junior technical schools in the area covered by the enquiry, and the sample of children (191) is not large enough to afford a proper comparison with the statistics of elementary and secondary schools given in Tables II and III. The sample, of which the industrial distribution is given in Table IV, does, however, show that in the area a much higher proportion of children leaving junior technical schools entered engineering and building, and a smaller proportion entered retail trading, than in the case of those leaving elementary schools. It appears, also, that the industrial distribution of those leaving junior technical schools more nearly resembles that of elementary school children than that of secondary school children.

TABLE IV[1]

Junior Technical Schools (*Boys only*).

Entrants into Principal Industries and Services.

Industry or Service.	Number of Entrants.	Number of Entrants as a Percentage of:	
		Total Leaving School.	Total Employed.
Electrical Engineering ...	29	15	19
General Engineering ...	19	10	12
Railway Service	15	8	10
Building	14	7	9
Cotton	11	6	7
Retail Trading	11	6	7
Coal Mining	7	4	5
Commerce, Banking ... National Government ... Local Government ... Professional Service ...	7	4	5
Construction and Repair of Motor Vehicles ...	6	3	4
Silk and Artificial Silk...	5	3	3
Wholesale Trading ...	4	2	3
Total (14 Industries) ...	128	68	84
Total (All Industries and Services)	154	81	100

Fuller details in Appendix.

UNEMPLOYMENT.

The rate of unemployment in the area surveyed amongst boys and girls at the end of two months after leaving school is shown for each kind of school in the following table :

Children Leaving :	*Percentage Unemployment.*[1]	
	Boys.	*Girls.*
Elementary Schools	18·6	23·0
Secondary Schools	17·4	30·2
Junior Technical Schools ...	16·8	

It is not possible to say what proportion of those who were unemployed at the end of two months had been continuously unemployed since leaving school, but there is little doubt that the proportion was very large.

The above figures reveal the gravity of the general situation. But a further analysis of the results of the enquiry shows that the burden of juvenile unemployment was unequally distributed over the different parts of the area. Thus, in the case of those leaving elementary schools, a rate of 40 per cent. was reached in some districts. Again, a big disparity existed in some districts between the degree of unemployment amongst boys and that amongst girls. In the following sub-areas the percentage unemployment[2] was over 20 amongst boys and /or girls leaving elementary schools :

	Boys. *Per Cent.*	*Girls.* *Per Cent.*
1. Golborne U.D. and part of Leigh R.D....	40·8	36·5
2. Standish with Langtree U.D., Blackrod U.D., Aspull U.D., and part of Wigan R.D. ...	39·4	25·6
3. Great Harwood U.D., Rishton U.D., Clayton-le-Moors U.D., Church U.D., Oswaldtwistle U.D.	34·7	30·6
4. Skelmersdale U.D. and part of Chorley R.D.	32·1	15·0
5. Adlington U.D., Withnell U.D., and part of Chorley R.D.	28·5	13·5
6 Padiham U.D. and part of Burnley R.D. ...	26·2	14·8

[1]Calculated in this table by taking the numbers unemployed as a percentage of the numbers available for employment, *i.e.*, the numbers employed plus the numbers unemployed but seeking work.

[2]Percentage unemployment in this case means the numbers unemployed expressed as a percentage of total leaving school.

7. Haydock U.D., Newton-in-Makerfield U.D., and Warrington R.D....	25·5	38·4
8. Horwich U.D., Westhoughton U.D.	24·9	23·0
9. Upholland U.D., Orrell U.D., Billinge and Winstanley U.D., Ashton-in-Makerfield, U.D., and Abram U.D.	23·5	39·0
10. Ramsbottom U.D. and part of Bury R.D....	23·3	30·0
11. Turton U.D.	17·8	26·2
12. Norden U.D., Whitworth U.D., Wardle U.D., Littleborough U.D., Milnrow U.D., and part of Bury R.D.	17·6	21·0
13. Rainford U.D., Prescot U.D., and part of Whiston R.D.	2·8	23·2
14. Atherton U.D., Tyldesley-with-Shakerley U.D., and part of Leigh R.D.	12·9	24·8
15. Irlam U.D., Urmston U.D., and part of Barton-upon-Irwell R.D.	13·2	24·0

It should be noticed that unemployment was greatest in the coal mining and cotton spinning and weaving districts, and that the districts named in the above list are mainly industrial in character. This conclusion is supported by a calculation which compares the general rate of unemployment amongst those leaving elementary schools in agricultural and industrial areas.[1] In the case both of boys and of girls unemployment was twice as heavy in industrial areas as in agricultural areas:

	Boys.	*Girls.*
Agricultural Areas	10·0	11·3
Industrial Areas	20·1	21·3

A minor point of considerable interest which emerges from the unemployment statistics is that in the case of a large number of towns and villages included in the enquiry unemployment was most unequally distributed amongst children from the different elementary schools in the same district. Many explanations might be advanced for this curious position, such as that the quality of scholars may vary considerably from one school to another in a given

[1] "Agricultural areas" include sub-areas in which 30 per cent. or over of those employed on leaving school entered agriculture. There were eleven such sub-areas. All other sub-areas (21) have been regarded as "industrial areas."

year, but it would be unsafe to dogmatise on this point without having made more intensive investigation of the circumstances of individual instances.

SUMMARY AND CONCLUSIONS.

The conditions of extreme industrial depression in Lancashire in 1930–31 appear to have had important repercussions upon the demand for juvenile labour, and the special area under survey presented the following significant features:

Amongst children leaving elementary school and seeking employment, 18·6 per cent. of the boys and 23 per cent. of the girls were unemployed at the end of two months. The corresponding percentages unemployed amongst those leaving secondary schools were: boys 17·4 and girls 30·2.

Of children leaving elementary schools, nearly two-thirds of the boys finding employment entered retail trading, cotton, agriculture, or coal-mining; while three-quarters of the girls found employment in cotton, clothing, domestic service, or retail trading. Conditions vary greatly from area to area, and even from school to school in the same area, but many of the smaller industrial towns depend very largely upon the cotton industry for employment of juveniles, and particularly of girls. Thus, in 20 of the 32 sub-areas into which the area under enquiry was broken, more than 37 per cent. of the girls finding employment entered the cotton industry.

In the area in which the enquiry was undertaken agricultural occupations are a much more important source of employment than is generally understood. Taking the whole area, 17 per cent. of the boys and 4 per cent. of the girls who left elementary schools and found employment entered agriculture: but in 11 sub-areas this percentage, for boys, was above 30 and in 4 sub-areas was above 50. It is significant also that juvenile unemployment was appreciably lower in the localities which are predominantly agricultural than in those which are mainly industrial.

The results of this enquiry appear to lend support to four conclusions which must be borne in mind in the consideration of remedial action.

Firstly, the problem of unemployment and the treatment of surplus labour must be tremendously complicated by the very great variation in conditions from one locality to another. The area in which this enquiry was undertaken corresponds closely to the Lancashire

industrial region which is usually regarded as being highly homogeneous. Yet it was found that beneath this superficial uniformity lay considerable diversity of conditions. Thus, amongst the 32 sub-areas examined, the proportion of boys finding employment who entered agriculture ranged between 80 per cent. and 5 per cent.; while the proportion of girls who entered cotton ranged between 90 per cent. and 1 per cent. Unemployment amongst those leaving elementary schools varied between 40 per cent. and 3 per cent. In some sub-areas unemployment was heavy for both sexes, in others for only one. Even as between different schools in the same sub-area the burden of unemployment was often unequally distributed. It is patent that the treatment of labour problems, whilst it may require centralised control for the framing of a broad policy, demands flexibility and detailed adjustment in the task of executing that policy in particular localities.

Secondly, the enquiry calls attention to a number of "black spots" which existed in 1931 amongst the smaller cotton and coal mining centres, where the amount of prolonged idleness enforced upon children after leaving school was exceptionally serious. In cotton areas, particularly, heavy unemployment amongst juveniles was accompanied, in the case of girls, by an almost complete dependence upon cotton for employment, so that an overcrowded industry was tending to become even more overcrowded. Such a condition, so far as it is enduring, certainly demands more radical treatment than any it has yet received,[1] and it may be suggested that in this connection the expedient of raising the school-leaving age to 15 years should be seriously considered as a means of affording relief not only to the juvenile employment situation but also to the problem of surplus adult labour. It is, of course, desirable that a change of this character should be introduced in all parts of the country simultaneously, but in the present emergency there is a strong case for the immediate application of the remedy in any district in Lancashire or elsewhere which displays the above-mentioned symptoms.

Thirdly, the almost complete dependence of many localities upon one industry and the serious effects which follow upon a depression in this industry make clear once again a point which was continually

[1]The practice adopted in some towns of encouraging children of 14 years of age to continue attending school until they are able to find work has undoubtedly administered partial relief, but at best it is a temporary and makeshift expedient and lacks the qualities of a fundamental remedy.

stressed in the Lancashire Industrial Survey Report: that the fundamental need is for a wider diversity of industries in each area which will relieve the pressure upon the staple industry and prevent entrants into industry from being forced into occupations which are already unable to absorb the available labour force.

Fourthly, the results of the enquiry give strong support to the view that the collection of statistics classifying all new entrants into industry is practicable, and that in all parts of industrial Lancashire efforts should be exerted to collect them regularly. There seems to be no doubt that the local education authority is in the best position for carrying through this work, and it is to be hoped that the methods used in this experimental enquiry will be subjected to close scrutiny and criticism. It will probably be found that particulars collected at the end of three months, or even six months, after the child has left school are more useful than any collected at the end of two months. But enquiries of this kind will not be entirely satisfactory until they are conducted at regular intervals—say, of three or six months—and so as to cover all juveniles aged 14 to 16 years, and unless the statistics are collected and arranged upon the basis of the Ministry of Labour classification of industries so that they shall be comparable with the Ministry's statistics of workpeople aged 16 years or over. A continuous and detailed study of the constitution of the labour force in the first two years of working life and of trends affecting it is a condition precedent to any effective control of the flow of juveniles into industry.

A. WINTERBOTTOM

Appendix

Percentage Industrial Distribution of Juveniles Leaving School.

Classification.	Elementary.		Secondary.		Junior Technical Schools.
Industries.	Boys	Girls	Boys	Girls	Boys
Agriculture	13·9	2·3	3·6	—	0·5
Fishing	0·9	—	—	—	—
Coal Mining	6·8	0·3	0·9	—	3·7
Brick, Tile, etc.	1·0	—	—	—	—
Chemicals	0·3	0·3	1·4	—	1·0
Soap, Oil, etc.	—	0·6	0·5	—	—
Iron and Steel	2·4	—	0·5	—	0·5
General Engineering	2·4	0·5	1·5	—	9·9
Electrical Engineering	1·1	0·3	1·7	—	15·2
Const. and Repair of Motors	1·5	—	2·7	—	3·1
Electrical Wiring, etc.	0·6	—	—	—	1·0
Cotton	14·0	27·9	2·8	2·2	5·8
Silk and Artificial Silk	0·2	1·7	—	—	2·6
Textile Bleaching, Dyeing	1·4	0·4	0·9	0·5	—
Clothing	1·3	8·3	—	1·2	1·0
Boots and Shoes	0·7	0·3	0·5	—	—
Bread Baking	0·6	1·7	0·5	0·5	—
Sugar Confectionery	—	1·7	—	—	—
Food N.S.S.	0·3	0·9	0·5	0·8	0·5
Furniture	0·9	0·3	0·5	—	1·0
Woodworking N.S.S.	1·7	—	—	—	1·0
Paper, Cardboard, etc.	0·4	0·8	—	—	1·6
Printing, Publishing	0·5	0·6	1·5	—	1·6
Building	3·5	—	3·0	—	7·3
Rubber	0·6	0·9	0·5	—	0·5
Other Manufacturing Industry	3·1	2·0	3·5	3·8	1·5
Services.					
Railway	0·4	—	—	—	7·9
Shipping	—	—	1·4	—	0·5
Wholesale Trading	0·7	1·1	1·8	0·8	2·1
Retail Trading	15·9	5·9	10·5	10·0	5·8
Commerce, Banking, etc.	—	—	3·4	1·7	1·0
National Government	0·7	—	2·6	0·9	1·0
Local Government	0·3	—	3·3	0·6	0·5
Professional Services	0·7	—	6·3	4·6	1·0
Domestic Service	—	6·1	—	—	—
Laundries, etc.	0·3	0·5	—	—	0·5
Other Services	0·8	0·7	1·5	0·7	1·1
Further Education	0·5	1·7	25·5	38·5	2·1
Staying at Home	1·0	12·1	—	17·0	—
Left District	0·3	0·4	3·1	2·7	1·0
Unknown	—	—	1·5	1·2	—
Unemployed	18·3	19·7	12·1	12·3	16·2
Total	100	100	100	100	100

PURCHASE AND PAYMENT IN THE EXPORT TRADE

THESE notes are written as a contribution to the study of the time that elapses between the placing of a contract for the supply of goods for export and the homeward remittance of sterling in payment for them. The importance of such a study lies in the possibility of a complete presentation of the facts enabling economists to estimate how soon fluctuations in the foreign exchanges and restrictions on the purchase of sterling in foreign countries are likely to affect, first, the total value of exports as shown in the Board of Trade Returns, and, second, the demand for sterling in payment for those exports. Before any adequate conclusions could be drawn, it would be necessary to have a presentation of the facts in all the principal export trades of the country; and the present article is confined, not merely to the export trade in cotton yarns and piece goods, but to such sections of this trade as come within the writer's personal experience, together with additions from the experience of others. The purpose of the article will be served if it leads others to examine the corresponding conditions in other export trades, and to collate the problem as a whole on the basis of a complete collection of the relevant facts.

Two consecutive periods must be examined: first, the period between the placing of the contract and the shipment of the relative goods, and, second, the period between shipment and the receipt of sterling in payment. Each of these two periods will be examined separately.

Cotton yarns are usually bought for quick delivery. Of the two most important destinations of British cotton yarns, Holland and Germany, the supplies for Dutch consumers are mostly required for delivery in a few weeks or even in a few days. Small orders are often shipped in the same week as that in which they are bought or in the following week. Larger orders are spread over a number of weeks, but shipments usually begin very quickly. In normal times, the Dutch buyer covers his requirements for some months ahead, buying when he thinks conditions favourable. But in the present disturbed and depressed economic conditions, requirements are

smaller and the readiness to take the risk of large purchases less evident. The German trade is similar to the Dutch, both in normal and in abnormal times, although the tendency to place large contracts with spread out deliveries is commoner in Germany. It is a usual practice, also, in this trade for the buyer to place a contract on a given basis of counts, and to call for deliveries as he requires them in specified counts at recognised price differences. This tends to delay the completion of orders, which may in this way remain open for several months. It is customary to expect a buyer to take up everything he has bought within a year : generally the period is shorter, but abnormal slackness of trade or a fall in the price level may increase even this maximum period.

Buyers in India and the Far East usually contract for larger quantities, and shipment begins later ; but the maximum duration of shipment does not normally exceed five or six months. Shipment begins as a rule in the month after placement, in some cases a month or two later : smaller contracts are spread over one, two, or three months, and larger ones over four to six. Some very large contracts cover supplies for eight to twelve months, but these are exceptional.

The trade in piece goods is subject to the same rules, with the difference that the production of cloth, including spinning, weaving, finishing, bleaching, dyeing, or printing, takes longer than the mere spinning of yarn. Much of the trade for the continent and for colonial markets is in stock goods : the cloth is bought in advance by the merchant and shipped " off the shelf " when he persuades the foreign buyer of the attractiveness of his designs and of the cheapness of his prices. In the bulk staple lines for the Eastern markets, also, there is a certain amount of buying in anticipation of demand, not only for the purpose of securing cheap prices, but also to enable the shipper to give quick delivery. At the same time, a very large trade is done in cloths which are not bought until they are sold, and in many cases the cloth cannot be woven until particulars of the designs required are received by mail from distant markets. In such cases, delivery does not begin until four months after the order is placed and continues for three or four months. In general it may be said that a fair proportion of cloth is shipped within one month from the placing of the order and a very large amount in from four to seven months.

Considerable as are the variations in this, the first period under review, they are far exceeded in the period between shipment and payment. It is in this period that the effects of world depression and

financial instability are most noticeable. On the Continent payment for yarns is generally more prompt than for piece goods, but in other markets the delay is similar in both cases. In normal times, yarn shipments to Holland are paid for in a week or a fortnight, and to Germany and Northern Europe in one or two months. Holland still keeps on the whole to the old rule and there is not so much backsliding from old standards in Northern Europe as in the rest of the Continent. But in Germany the old customs have, of necessity, been discarded, and, although in many cases business is booked on the old terms, sellers are forced to wait longer for their money. In the Balkans, where even in normal times credits of three or four months were given, and nowadays in Central Europe as well, the homeward remittances for yarns and for cloth are, with some exceptions, difficult to obtain in less than four months, and this period is often exceeded. The havoc wrought by Government restrictions in foreign countries on the sale of currency is particularly severe and the delay is in some cases quite indefinite.

Sales of both yarn and cloth to the East are generally paid for by bills of exchange drawn at one, two, three or four months sight, so that the remittance arrives in from two to five months from the date of shipment. For the purpose of the present enquiry, however, the important date is not necessarily that of the homeward remittance, but of the covering of sterling exchange, where this takes place before the due date of the bill of exchange. In India, where exchange is pegged to sterling, buyers frequently wait until the bill falls due before they buy their exchange, but in other countries, particularly in China, the buyer often covers, if not all, at any rate part of his sterling requirements when he buys his supplies of yarn or cloth.

In the countries of South America the variations are considerable, especially as it is customary for sellers to be lenient in extending credits to suit their customers. It appears that very little money comes in under four months, and even six months cannot be set down as a maximum. In fact, for certain South American countries, six months is too short for an average period. East Africa resembles India; West Africa resembles South America. The average for Canada is estimated at from three to four months, and Australia at six months or more.

A final word of warning: the above notes have been written without drawing attention to the relative importance of the various markets. The student must bear in mind that conditions in a big

market will affect his conclusions more than conditions in a small one. As has been said, exports of yarn to Germany and Holland are even to-day much heavier than to any other group of countries, and, although quick deliveries and relatively prompt payments may not seem from the instances quoted to be general, due weight must be given to the fact that the method of trading with these two countries is more important relatively than with the majority of other markets. And similarly, when conditions in the cotton trade are collated with conditions in other trades, the results must be weighted in proportion to the value of the goods exported by each industry.

LEONARD F. BEHRENS

A CURSORY GLANCE AT EXCHANGE REGULATIONS

THE exchange difficulties and restrictions from which so many countries are now suffering are merely an advanced symptom of the general economic malady which is besetting the world. Their ultimate cause is to be found in the unhealthy financial conditions which have prevailed since the conclusion of the Great War, conditions too well-known to require discussion here. The proximate cause may, however, be traced back to the financial collapse in the United States of America during 1929–30 with the attendant greatly aggravated fall in prices and loss of confidence. The danger of international repercussions did not manifest itself to the world at large until the Oesterreichische Credit-Anstalt, the largest of the Austrian banks, failed in May, 1931. This failure was closely followed by the insolvency of the great German wool company, the "Nordwolle," which in turn involved the suspension of payments by the Darmstädter und National Bank. In the weeks immediately preceding the two last-named events, however, a panic was developing in Germany, and, with the miseries of the inflation period still in their minds, the people rushed to buy foreign currencies, thus greatly accelerating the export of capital abroad which had noticeably been in progress since the Credit-Anstalt failure.

Coincident with the loss of confidence were the difficulties encountered in the service of loans, many of which had been rashly obtained since the War. The rapid and continued fall in world prices, particularly of primary products, the curtailed purchasing power of the masses and the intensification of ultra-nationalism with its handmaiden, ever higher tariffs, rendered the burden of debt services more costly and the acquisition of foreign exchange by debtor countries for the fulfilment of those services more difficult.

It became apparent that some measure of exchange control in the countries most affected was necessary for one, or both, of two reasons, namely :

(*a*) as a protection against the flight of capital ;

(*b*) as a consequence of an actual lack of exchange to meet foreign obligations.

Further, the countries in which exchange restrictions are, or have been, operative may be divided into three groups :

(1) countries which, owing to a lack of confidence, whether merited or not, imposed restrictions of varying degrees of severity with the intention of protecting themselves against a flight of capital.

(2) countries which, to provide funds for the service of their obligations, found it necessary to impose restrictions for the purpose of curtailing imports.

(3) countries, forming by far the largest group, which imposed restrictions for a combination of both the above-mentioned reasons.

Group (1) includes the countries which imposed restrictions of a comparatively mild nature, notably the United Kingdom and Scandinavia, which were adversely affected by the Central European disasters of May to July, 1931, and, in the case of this country, by the disquietude engendered by the socialist administration of its finances.

Thus, for many reasons repatriation of foreign owned balances and short term obligations took place, and after vain attempts to preserve the pound by heavy gold shipments and by raising credits in the United States and France, the United Kingdom suspended the gold standard, an act which also compelled those countries whose currency was most closely connected with sterling sooner or later to follow suit. These countries, with the exception of Canada and Newfoundland, British Honduras, South-West Africa, and the Union of South Africa and its Dependencies, comprise the British Possessions, Scandinavia, Iceland, Portugal, and Bolivia, all of which simultaneously with the United Kingdom or within a short period thereafter suspended the gold standard, while several also introduced exchange restrictions. In Portugal, which had re-established the gold standard (on the gold exchange standard with sterling) in June, 1931, some measure of restrictions had already been operative : Sweden, Finland, and British India, maintained their restrictions for a short period : Bolivia declared a thirty days' moratorium and then subjected the sale of exchange to the control of an exchange board under the administration of the central bank, a situation which still obtains, while the United Kingdom removed all restrictions at the beginning of March, 1932. Denmark, a large exporter of agricultural produce, experienced the difficulties peculiar to countries

of which that produce is the staple export, and has found it necessary to continue the exchange control and to reinforce the restrictions by a control of imports, attained by refusing to allow payment for imported goods unless a licence for the requisite currency has been previously obtained. The restrictions do not appear to be sufficiently severe to bring Denmark within the scope of the third category.

Group (2) comprises the great countries of primary production. As early as 1929, Australia, fettered with an increasingly heavy burden of debt from loans too easily acquired for non-productive purposes and too carelessly dissipated, burdened with wages forced up by trade unionism to uneconomic levels and faced with an unprecedented fall in the value of its exports, began to experience difficulties in the loan services, a position which led to the establishment of an exchange pool by the Australian banking ring, and a rationing of exchange. Early in 1931 the position had become acute and operations on the " outside market " forced the ring to bring its quoted exchange rates to a figure more nearly approximating to the gold value of the Australian currency, already *de facto* divorced from gold. The Argentine Republic began to experience similar difficulties at the same period, but these did not become acute until the autumn of 1931 : Brazil, on the other hand, found it necessary to promulgate a moratorium on foreign commercial obligations and to impose exchange control towards the close of 1930, an example followed by Uruguay in the summer of 1931. Chile, severely hit by the maladministration of a corrupt government, since fallen, and by the ruinous loss of its European nitrate markets coupled with a continued and continuous fall in nitrate and copper prices, was also compelled, after an energetic fight against overwhelming odds, to besmirch its high reputation for financial integrity, built up over a period of eighty years, by defaulting on its overseas loans and to impose exchange restrictions of the severest nature. Colombia, which supplies the bulk of the coffee consumed in the United States, did not suffer to the same extent as many of its South American companions, but has nevertheless been forced to adopt restrictions of a moderately severe nature. Venezuela, a country in the peculiarly favourable, and for South America, unique position of having no external debt, has experienced a shortage of foreign currencies : Peru has defaulted on foreign loans and Ecuador has suspended the gold standard, but none of these three countries has so far imposed exchange restrictions. Central America has not escaped the general malaise. Mexico, Costa Rica, Nicaragua, and Salvador have in turn

been forced to adopt protective measures, and, in the West Indies, Santo Domingo has suspended foreign loan amortisations.

The unfortunate countries of Central and North-Eastern Europe and the Balkans form group (3). Impoverished by war, inflation, reparations, overspending and debts too lightly incurred, with returning confidence easily dissipated in the light of previous experience and shattered by the events of May to September, 1931, it is small wonder that here, in varying degrees, the severest difficulties are encountered. Austria, Hungary, and Greece have imposed restrictions so stringent that trading is virtually impossible : Jugo-Slavia and Latvia are in little better plight. In Bulgaria and Germany the situation is steadily deteriorating and in Czecho-Slovakia, where a close control of exchange is also enforced, obstacles to commerce are tending to become almost as great. Turkey enforced exchange control in 1929, and has aggravated the dislocation of imports by the adoption of a quota system, but, by comparison with the other embarrassed countries of Europe, does not inflict undue hardships on traders.

Spain, while suffering from the general economic depression, occupies a peculiar position in that many of its difficulties may be attributed to internal political events. In April, 1931, it became necessary for exchange restrictions to be imposed.

Before leaving the analysis of the forces which combined to make exchange restrictions necessary in various countries, it must be stressed that, although the grouping detailed above is broadly true, many of the factors in each group are interactive, and that each fresh difficulty experienced in one country reacts not only on those other countries which have been forced to adopt restrictive measures, but on the whole of the civilised world. Nor must the influence of politics in India and the Far East and the situation induced by the low value in terms of gold of the great " silver standard " markets be overlooked.

The particular conditions operating in each of the above-mentioned groups have brought about interesting differences in the technique of exchange control. In Central Europe relief has been demanded and given to a large degree in respect of obligations incurred prior to the imposition of restrictions or prior to a specified date : of this aspect the " Standstill " Agreements with Germany and Hungary, regulating " old " obligations, are convenient examples. Foreigners' balances in Germany in national currency accumulated before July 13th, 1931, were " blocked " while balances

acquired after that date, subject to certain conditions, were intended to be " free." Obligations in foreign currencies were the subject of special regulations. On the other hand, South American countries have allowed the free disposal of foreigners' balances in national currency accrued prior to specified dates and have " blocked " those acquired subsequently. The United Kingdom imposed restrictions in connection with the purchase of foreign exchange, but these did not apply to contracts existing before the promulgation of the Treasury Order introducing them, nor were foreigners not resident in the United Kingdom affected by the Order. It is interesting to recall that the Order was withdrawn on March 3rd, 1932, after having been in force less than six months.

Of the methods still in force for the acquisition and effective control of foreign exchange the variety is no less interesting. On one point, however, there is unity (with the exception of Australia, New Zealand, Canada, and Newfoundland—where the only restrictions are on the transfer of gold—Norway and Iceland) namely, the centralisation of control in the hands of the national or central bank or of a committee specially appointed for that purpose, and the declaration and surrender to the central authority of foreign exchange privately held.

Attempts are made in some countries to limit imports, discriminating between necessaries and luxury goods, by the granting or withholding of exchange or by a system of licensing imports with or without the imposition of " quota " or " contingent " regulations. A variation of some or all of these systems obtains in a general way in all the countries falling within groups (2) and (3). Of greater interest, is, perhaps, on account of its naïveté, the system which, in addition to the foregoing provisions, insists that no exports from the country concerned shall be invoiced in the national currency, but that they shall be invoiced and paid for in the currency of the country of destination or some stable " free " foreign money which must be surrendered to the competent authorities in due course. Notable among the countries which have adopted this measure are Austria, Hungary, Jugo-Slavia, Greece, and several of the South American republics.

The inevitable consequence of the multiplicity of regulations and restrictions is a gradual strangulation of international trade, which in turn induces the imposition of still further restrictions, thus creating an impasse—everyone would be a seller, and none a buyer.

In an endeavour to ameliorate the evils resulting from the unnatural barriers created by exchange restrictions, attempts have been made to establish " clearing " arrangements—which amount in the end to barter—for the settlement of transactions between the two countries concerned through a central authority in each country. For example, A in Switzerland buying from B in Austria pays x francs to the Swiss central authority while C in Austria buying from D in Switzerland pays y schillinge to the National Bank of Austria, which acts as the Austrian authority. At the end of a previously determined period the respective amounts accumulated in each country are " balanced " at an arbitrary rate of exchange and " compensated " between the two authorities. In certain special circumstances such an agreement may be advantageous, but in practice it has not proved an unqualified success and appears to have tended to favour the weaker of the contracting parties to the detriment of the stronger. A further inherent weakness lies in the fact that usually little or no account is taken of old outstanding debts, though certain provision for such debts has been made in the recently concluded agreement between Germany and Hungary.

The present condition of world trade points to the conclusion that, while in certain circumstances the imposition of exchange restrictions may be necessary for the protection of a country's currency, such restrictions in practice tend to defeat their own aims, and the wisdom of their imposition is open to the gravest doubt.

May 9th, 1932. F. MASON

REVIEWS

The Dynamics of Industrial Combination. By H. A. Marquand. (Longmans, Green. 1931. 12s. 6d.)

In this volume Professor Marquand draws mainly upon the history of industry in Great Britain and the United States in the past thirty years for a study of the forces which underlie the growth of industrial and financial units. After pointing out the changes which have come over public opinion in its attitude towards the giant concern and the manner in which the social and economic issues raised by its appearance have been modified in the present century, he discusses the various forms of combination and the economic incentive which is responsible for each. The views advanced are strongly coloured by the writings and theories of the many American economists who stress the importance of financial interests and promotors' activities in the amalgamation of businesses, and it is strange, although refreshing, to find an English writer appealing for support to the writings of Veblen or Brandeis.

Professor Marquand brings out quite clearly that most perplexing fact in the evolution of the units in modern industry: that the forces making for growth are not necessarily, perhaps not usually, those which make for increasing efficiency. If this is the case then it becomes pertinent to ask how it is that great concerns brought to life for reasons other than efficiency, yet manage to maintain their existence in the face of competitors smaller in size and more nicely organised for the lowering of costs. There is here a bewildering and still largely unexplored field for the study of quasi-monopoly and it is rather disappointing that only slight attention is paid to this phase of combine growth.

Nevertheless, the book is a welcome addition to trust literature by English writers, and those who seek to understand the broad movements in American industry will find this a much more concise and fluent source than the many dreary and voluminous tomes which some American writers have devoted to this question.

J.J.

Essays in Persuasion. By J. M. KEYNES. (Macmillan. 1931. 10s. 6d.)

MOST of us, we expect, will find this volume of collected papers appallingly depressing, especially so as we find ourselves in a situation which does not at present promise much hope of solution other than from among those offered to us in 1925. The dangers of monetary mismanagement are illustrated here, and apparently, in retrospect at all events, they are much more widely realised than during the immediate post-war years: Mr. Keynes pays a tribute both to Mr. McKenna and Mr. Goodenough for their part in this education. Evidently, however, the knowledge given us by the events that Mr. Keynes relates does not obviate the difficulty confronting any country desiring to avert the misfortune of which it is so well aware. In another field, a realisation of the inevitable disharmonies accompanying the payment of reparations, is not in itself a guarantee against the occurrence of those disharmonies. And having found the fruit the ashes we expected it is doubly depressing to be forced to eat yet again.

Mr. Keynes chooses a smaller stone to sling in the present, but it hits the broad mark the May Committee erected: it is a stone which during the past few years has bounced off many a "contractionist." It is never easy to justify a policy hurriedly designed to alleviate a situation of organic and prolonged growth, but probably on the author's arguments alone, viz: the necessity for lowering the market rate of interest, something can be said for a policy widely supported by those in charge of funds for investment. A closing down of the swings will certainly do harm, but after all, there is the increased custom for the roundabouts. Yet, this is a further reason why even the "Economic Possibilities for our Grandchildren" cannot dispel the bleak feeling rarely accompanying a book so vivid. The May Committee supported the decision that caution and timidity prompt: they may still support it when and where the justification is by no means apparent. "Contraction" as a remedy may be good though painful; Mr. Keynes gives a shrewd blow to those disposed to make of it a penance.

J.S.

The Cotton Trade and Industrial Lancashire, 1600—1780. By A. P. WADSWORTH and JULIA DE LACY MANN. (Manchester University Press. 25s.)

WITH the publication of this volume a project on which Unwin set great store comes to fulfilment. It must be eight or nine years

since he first mentioned to his colleagues, with high praise, the researches that were in process, independently by Miss Mann and Mr. Wadsworth, into the antecedents of the Industrial Revolution in cotton manufacture. He hoped, but was not quite certain, that it might be possible to weld the results into a single story, and that a small book, comparable in size to his own *Samuel Oldknow*, might be added to the Manchester series of economic history. If he could have seen the five hundred pages of compact workmanship that have now appeared there would have been jubilation.

Throughout, the book is instinct with Unwin's spirit. It is a co-operative enterprise—and he was always urging team-work. Though it is concerned with industry and trade the wider sociological developments, with which he was always preoccupied, constantly obtrude. Though its title implies a limitation to Lancashire it has much to say of parallel developments in other countries—and for Unwin no canvas short of the European was large enough.

It is not entirely an easy book. Most of it is concerned with the period before the great inventions, and there are few of those technological milestones which, in some works of industrial history, are a help to both author and reader, even if they often lead to neglect of more vital features. In the preface the authors disclaim any deep knowledge of the mechanics of the industry ; but they are clearly so much better versed in it than most of us that it is to be regretted they made no attempt to lay down its elements. A short description of the early machines, a few simple diagrams, a summary of the conclusions of earlier historians, by way of concession to the ill-instructed, might have widened the circle of their readers, without in any way lowering the standard of scholarship. That is the sole complaint one has to register.

Two of the five books into which the volume is divided are from the pen of Miss Mann. The first gives detailed accounts of the growth of the cotton manufacture, of the widening of markets resulting from the traffic in slaves, of the stimulus to technique provided by the cottons and muslins of the East, and of the relative failure of Lancashire until political confusion in India brought about the decay of her chief competitor. The second presents a wealth of material relating to the early inventions ; the relations between Wyatt and Paul are made as clear as they are ever likely to be ; and some of the legends that have gathered round the career

of that " difficult " genius, Robert Kay, are dispersed by Miss Mann's researches in the *Archives Nationales*.

An interesting contrast is drawn between the French and the English cotton industries ; and the greater development of the latter is traced, not to any geographic or climatic advantage, not to any superior inventiveness of Englishmen, but to the more favourable social setting provided by this country. In Britain there was no sharp cleavage between the landowning and manufacturing classes, and capital was more easily wedded to enterprise. Taxation was less onerous and impediments to the movement of commodities and labour were less serious. Above all, corporate regulation of manufacture had fallen into disuse at an early period ; and, whereas in France a well-intentioned and enlightened bureaucracy tried to force the pace, in England the government stood aside and the way was open to the venturesome industrialist. Miss Mann has clarified much that was obscure, and teachers of economic history everywhere must be hard at work revising their lecture notes as the result of her discoveries.

Mr. Wadsworth's sections are less susceptible of summary than those of his collaborator. " Organisation " is the dominant word in the title of two of his three books, but he has wisely given a broad interpretation to the term. His researches into the Palatinate and other records reveal a rich variety of industrial structure in sixteenth and seventeenth century Lancashire, and a gradual development from a community of independent landowners, with whom spinning and weaving were subordinate to agriculture, to one of cottagers almost entirely dependent on the making of textiles. The Manchester fustian dealers, like Humphrey Chetham, distributed raw material to smaller capitalists, who were the employers of the country spinners and weavers ; and, as time went on, the putting-out system increased at the expense of the independent producer. Throughout the seventeenth century the drift of enterprise was away from the corporate towns to the freer atmosphere of the countryside. Fortunately, the attempt of the Preston Drapers to control the growth of the country industry, and that of groups of small masters in other towns to enforce apprenticeship regulations were unsuccessful. But they did something to retard the growth of the industry in these places ; and it was in towns like Manchester and Bolton, where society was more fluid, that progress was most rapid. The introduction of the Dutch loom, of the silk-throwing machine, and of water-power in the finishing processes necessitated

some aggregation of labour into workshops, and the essentials of the factory system are shown to have existed in Lancashire long before the days of Arkwright and Crompton.

Not the least illuminative section is that dealing with the mechanism of credit. A Bolton linen draper who bought his raw material through a London agent, and put out cotton and linen to the workers through a country agent, is seen discounting bills for one set of traders and providing another with a steady flow of remittances on London—a process in which he was aided by his appointment as " Returner " or Receiver of revenues to the Treasury. The part played by such Receivers in the development of country banking is only just coming clearly to view : we shall know more about it when Mr. Edward Hughes' volume on the salt industry and its relation to public finance is added to the series. By his illustrations of the use of the inland bill, which postponed the setting-up of note-issuing banks in Lancashire to the later eighteenth century, and by his demonstration of the manner in which the larger manufacturers acted as a channel for the distribution of capital before the days of deposit banking, Mr. Wadsworth has made a substantial contribution to financial history.

A brief catalogue is all that space will allow of other topics which are treated at length. We are given accounts of the early developments of transport in Lancashire, of the local effects of the South Sea Bubble, of the organisation of the Slave Trade, of the growth and distribution of population within the country, of the beginnings of Trade Unionism, and of the first organised strikes. The industrial autobiographies of over a hundred Manchester weavers are analysed, and the amazing careers of large capitalists, like Samuel Touchet, are set forth in detail. It is all the product of first-hand research, often into remote and hitherto unexplored sources. Throughout, Mr. Wadsworth shows insight in his interpretations and freshness in the presentation of his results. It is no abuse of language to speak of his final chapter on the " Manufacturing Poor " as a masterpiece : it is to be counted as one of the best pieces of historical writing of recent years.

T.S.A.

The Gold Standard and its Future. By T. E. GREGORY. (Methuen. 1932. 3s. 6d.)

As the title suggests, this work is concerned with the position of this country in relation to the breakdown of the international gold

standard—a breakdown, the importance of which is emphasised against the fundamental instruments of economic progress that stable exchanges and an international means of payment have proved themselves to be. Connected as this central thesis is with the existence of other world disharmonies—"gold maldistribution," reparations, the distrust of foreign exchange for central bank reserves and the consequently greater "gold shortage," and monetary mismanagement—Professor Gregory's work could not have appeared at a more opportune moment, or at a time calculated to have a more educating influence. After a political crisis, which incidentally helped to force us off the gold standard, we are at last beginning to be "gold conscious," and this book can be recommended to those who regard gold as a name, whether instinctively to be feared or conservatively to be respected, rather than the basis of a monetary system more easy to condemn than understand.

It is to be feared that the essential simplicity of this system is not easily to be conveyed, especially at a time when it failed to work because of abandoning this simplicity. Professor Gregory, therefore, has been faced with two problems—to explain the mechanics of inter-related income structures and international payments, and to expose the conditions which cause the mechanism to fail. One need not say how well both problems are resolved; but it is likely that those to whom the first solution is in the nature of a guide, will have their understanding extended in appreciating the author's skill in exposing our mistakes, and those who are indebted for a fuller understanding of the events of last summer may at least think they do not need the author's help in the first problem, but many of them will be in error.

There is a misprint on p. 69, § 1, where dollar prices should be multiplied by 100.

J.S.

The National Debt. By E. L. HARGREAVES. (Arnold. 1930. 15s.)

THIS work emphasises the lesson that can be learned from a study of the evolution of the present National Debt. The lesson is easily repeated. Debt is amassed rapidly and recklessly during war time to be slowly and grudgingly liquidated during peace. Loans are floated below par at low nominal rates of interest, so making difficult the one effective method of reducing the burden of debt when borrowing has ceased. If conversion operations have to be carried through with the offer of repayment then, of course, parity must be

attained before any prospect of success is discernible. We have made that mistake for a century. Sinking fund operations of one kind or another appear to be the only alternative acceptable to a conservative country, and sinking funds are temptations both to chancellors and taxpayers. Sinking funds have been raided, have been amassed by borrowing, have been reduced and suspended for a century. The first conclusion is that it is very much easier for a nation to get into debt than to repay it. And it is a conclusion that still stands, for after Mr. Hargreaves has illustrated, criticised, and despaired of the actions of finance ministers he summarises the hopes of a country burdened with £M7,700 of debt in these words: "So far, therefore, as a reduction of the burden of debt is regarded as a problem to be solved, the solution must come from a deliberate financial policy consistently and resolutely pursued." It was, I expect, too much to hope that the author was keeping carefully hidden some remedy to be disclosed in the last chapter, but it was with some effort we stifled a feeling of disappointment.

After this disappointment is banished one can more clearly assess the value of this meticulous and laborious research. Only one point of criticism can be mentioned, and that relates to the question of shifting the burden of debt to posterity (pp. 60—61). "if the war is financed by taxation, the cost clearly falls upon the generation that wages it . . . . If borrowing is employed, the cost is felt in the taxation which has to be raised in order to pay the interest on the debt." Perhaps Mr. Hargreaves feels himself absolved from heresy by writing "the cost is felt," but surely the burden we felt was the curtailment of our rations. But this is a minor matter which has little weight to offset the merit of this valuable and complete historical reference.

J.S.

CANTILLON: *Essai sur la Nature du Commerce.* Edited by HENRY HIGGS. (Royal Economic Society. 1931. 15s.)

THOSE who welcome the slight but perceptible growth in interest in the history of economic ideas will be grateful to Mr. Higgs for this careful volume. Thanks to the happy discovery of Jevons the position of Richard Cantillon is now assured. It is certain that he was a thinker of an extraordinary perspicuity. Perhaps the most striking of his theories was that on value. He computes "intrinsic value" in a manner surpassing that even of Smith; allowing for the complications of specialised labour, restricted land, and

porterage ; and then goes on to relate such value to market price in a masterly fashion. On population he anticipates Malthus ; though this is not to say that Malthus drew on him. As Cantillon was a financier it is to be expected that his monetary theories would be good ; they are, indeed, in parts brilliant. These are, it is admitted, the high lights of the Essay, and there are long passages tedious to the modern reader, but even so the work is so far above the average of its time that he could dip into it with profit.

For the historian of ideas it is a mine of argument. In France, where ideology is more exhaustively studied, the relation between Cantillon and Quesnay is clearly established. In England he fits admirably into the mysterious gap between Petty and Adam Smith. Further, Mr. Higgs has confirmed and amplified Jevons' assertion that Postlethwayt had borrowed largely from Cantillon.

The translation, though sound, appears cumbrous and pedestrian. Lest this should reflect harshly on Mr. Higgs as a translator we must add that the translation has been deliberately collated with extracts from Postlethwayt in an endeavour to get back to the original ; for Mr. Higgs contends that the original Essay was in English. So far as one can judge, his contention is as fully proved as the slight data will allow.

This is a book for the few, but the Royal Economic Society is to be congratulated on its publication, as on the choice of Mr. Higgs, whose knowledge of eighteenth century economic treatises must be unsurpassed. The book is a monument to his careful and devoted industry.

E.R.

The Bank for International Settlements. By PAUL EINZIG. (Macmillan. 1930. 7s. 6d.)

The World Economic Crisis, 1929–31. By PAUL EINZIG. (Macmillan. 1931. 7s. 6d.)

The Fight for Financial Supremacy. By PAUL EINZIG. (Macmillan. 1931. 7s. 6d.)

Behind the Scenes of International Finance. By PAUL EINZIG. (Macmillan. 1931. 7s. 6d.)

THE events of the past few years have been such as to convince most of us both that the economic issues to be faced have increased immeasurably in gravity, and that the way to recovery cannot be

discovered and followed independently by any single country—but rather that the destiny of one is inextricably interwoven in the destiny of all. We have become less prone to conviction by those who unduly emphasise an occasional isolated point of relief, and more willing to realise that a careful and impartial seeking for root causes is the one condition necessary to the devising of any plan which shall help to hasten recovery.

Attention which was formerly concentrated on local problems in the search for national relief, is now directed to the analysis of the interdependence of such issues, and to seeking an understanding of those larger issues of which they are in many cases facets. It is no mean task ; and at a period when economic fortune lies so much in the hand of the politician, we welcome the light shed by the writings of Dr. Einzig, clarifying as they do so many complex problems, and showing that most of the world's difficulties are capable of solution, if only a change of attitude and action can be induced on the part of those concerned. The second edition of *The B.I.S.* appeared when final arrangements had been concluded for the establishment of the Bank—and deals with the possibilities and limitations of this new institution. The correct answer to many of the problems raised can be provided only by experience, and for the present our judgment must be of a tentative nature, and the further complication of world affairs which has occurred since the establishment of the Bank provides us with additional warning in this regard. The author lays particular emphasis on the shortcomings of co-operation among central banks, but it is to be doubted whether formal organisation will of itself be enough to secure a signal success for the use of what is, after all, merely a new instrument for the achieving of the same desired end. Is it justifiable to assume that although the Bank will begin business with a paid-up capital of 125,000,000 Swiss francs, it will possess from the very first an almost unlimited goodwill ? In the sense that what is true of the chief constituent elements is also true of the whole, this view is understandable. But in the nature of things, the innovation which the Bank represents, the doubt as to development of policy and many other factors suggest that the aggregate of central bank prestige will not pass automatically to the new institution. Dr. Einzig sees great danger in the possibility of undue credit expansion by the Bank and suggests that political forces will lead inevitably to the choosing of the line of least resistance. This is clearly a question of degree, and we know in practice that a clear line of demarcation between safety and danger is not to be found.

But it seems reasonable to expect that this danger will remain nothing more than an extremely remote possibility. The chapter dealing with the influence of the Bank on world prices is of greatest interest and value. But one sentence is we think enough to demonstrate that it is also inconclusive : "It is only if and when, and so far as, the decline (in world prices) is due to monetary causes that an intervention on the part of the B.I.S. is desirable." (p. 87.)

This, along with the other books of Dr. Einzig, suffers a serious limitation in that it is an attempt at popularised exposition. The result involves as much tedium and disappointment for the specialist as lack of meaning for the layman. Realistic economics, nowadays, is an ever growing maze—where those who lack or spurn the compass-like help of pure theory are well advised not to wander. The problems are those on which, as yet, there can be no public opinion, and we render a disservice both to the layman and the science to fall into the error of believing otherwise. So far as searchers after truth are to be found in the ranks of those whose task is to fashion state policy in the economic sphere, these works will have their value.

The World Economic Crisis and the other two volumes are devoted to a discussion of various aspects of the major problems which the last decade has brought. Again they ask a judgment on remedies proposed, some of which are not expressed in very definite terms, and most of which are far beyond the competence of the general public to handle. If Dr. Einzig describes the difficulties of 1929–31 as a crisis—what word would he employ to describe the events of last autumn ? We are told that "if the crisis were understood more widely, this would do much to hasten recovery, and would avert the danger of complete economic chaos ; so long as the crisis is regarded by the majority of the public as something supernatural—or at any rate, something as entirely beyond human control as an earthquake or a cyclone—they may be inclined to exaggerate its dangers." This seems to us too optimistic a view. We are now accustomed to experience minor breakdowns in the economic system when employer and worker fail to agree as to the terms on which their co-operative activity shall proceed. Almost all who are directly concerned appreciate fully the cause and nature of the problem. Yet, just as there can be no formula which can be automatically applied to resolve or prevent these difficulties, so there can be none on which we can rely to eliminate or even minimise fluctuations in economic activity or rescue us from depression once we are in its grip. In a

period of peculiar abnormality this is more than ever the case, and the author himself tells us in plain terms that " the crisis is largely the result of factors beyond human control." (p. 83.)

In *The Fight for Financial Supremacy* an answer is sought to the question " Will London retain her supremacy as the world's banking centre ? " Here the intimate knowledge which Dr. Einzig possesses of the workings of the city are shown to good advantage. He also points out plainly the many diverse elements which have led to London's achievement of her paramount position, and the mistaken emphasis which is too often laid on the value of amassing large resources, and is inclined, therefore, to the optimistic view that London possesses certain vital points of advantage which even the severity of depression is not likely to displace. This has of course proved to be very much more true than many people dared hope. The part played by France in the world financial situation called for close and unmistakably critical comment—but here again the problem has now assumed an entirely different complexion. The remaining volume is indeed entirely devoted to an examination of the part played by France in the mêlée of recent years. " It is the ambitious and destructive policy pursued by France in the sphere of international finance that has paralysed the machinery of our economic system ; . . . it is the French reparations policy which has prevented the financial consolidation of Europe since the war ; it was the French gold-hoarding policy which brought about the slump in commodity prices, which in turn was the main cause of economic depression." This is a serious indictment indeed—though many people in this country feel that it contains a large element of truth. To live in France is to grasp in some measure a realisation of the fact that her problem is different from the view that we so often get from this side of the Channel, and, more important, that the French criterion of policy is vastly different from our own.

Unfortunately, the present trend of events would suggest that Dr. Einzig will be well supplied with topics on which to offer—at frequent intervals—clarified exposition for the uninitiated.

S.G.R.

Economic Essays and Addresses. By A. C. Pigou and Dennis H. Robertson. (P. S. King. 1931. 10s. 6d.)

In an essay not previously printed—" The Transfer Problem," pp. 170—181—Mr. Robertson debates the existence of a transfer burden upon a country paying reparations. The two points of

view are stated thus: "The deniers of 'transfer-burden' correctly point out that if, as it is natural to assume, the reparation-money is raised by taxation in the paying country (. . . Germany) and used for remission of taxation in the receiving country (. . . America), the net annual flow of money devoted to the purchase of goods is less in Germany, and greater in America, under the new conditions than under the old." "The champions of 'transfer-burden' are . . . sometimes tempted to argue as though the fact that reparations are being paid proves that there must have been a gold flow from Germany to America and an alteration in the relative size of gross money incomes in the two countries."

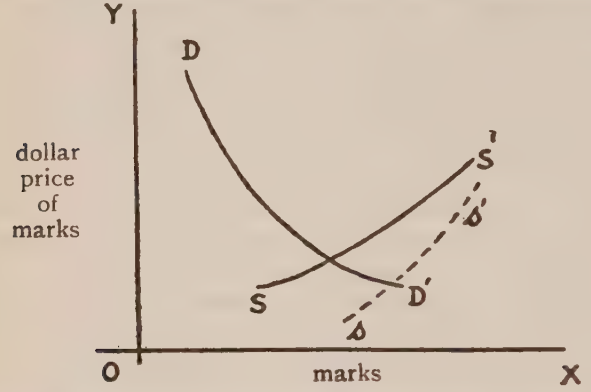
The problem can, I think, be more clearly presented by adopting a construction alternative to Mr. Robertson's and based upon an alternate hypothesis. Let us assume that the effect, if any, of reparation payment is absorbed by the alteration in one variable—namely, the rate of exchange of the monetary standards of the two countries—the income structure, *i.e.*, the price indices of domestic wealth, remaining constant in the two countries. This hypothesis should easily be reconcilable with that of rigid exchange and flexible income structure, for an adverse movement in the real terms of trade, which under a rigid gold standard technique is made effective in a reduction in the domestic gold-price indices, must under the same condition be brought about by exchange pressure. The (hypothetical) exchange movement then becomes an index of the alteration in income structure necessary to preserve long period equilibrium, and thus of the movement in the real rate of interchange.

The problem then resolves itself into an analysis of forces operating on the demand for and the supply of marks.

Let DD' represent the demand for marks on the part of Americans wishing to make payment for German goods, and let SS' represent the supply of marks on the part of Germans making payment for American goods; the two curves together representing conditions before the payment of reparation. Let the distances (parallel to OX) between SS' and ss' represent the marks that have to be obtained at different rates of exchange by the taxation of Germans for the payment of reparation expressed as a constant number of dollars.

Evidently our concern is with the position of SS' and DD' when reparation is being made, for, of course, the position of ss' relative to SS' will be invariable.

Germans are being forced to expend a variable quantity of marks upon the purchase of German goods to be sold for dollars for the benefit of Americans, and as a result the freely disposable part of their incomes will be so much reduced. The demand for American goods will fall, being reduced more when the exchange is less



favourable and less when it is more favourable to Germany. Hence, when reparation payments are being made, *SS'* will move bodily towards *OY*, and will be distorted in shape by the movement being the greater the lower is the mark's dollar value represented. Hence the new total supply schedule of marks will be given by a curve composed of the new *SS'* plus the difference between the old *SS'* and *ss'*.

The position of *DD'* will also be affected by the payment of reparations. The goods paid for by means of the additional budgetary burden Germans are called upon to bear, will be bought out of income by Americans, and the proceeds remitted to the state, to be spent by the state or by Americans to whom the money may be transferred. Thus, Americans, including in that term the state, finding their expenditure capable of expansion, will present an increased demand for goods. The demand for German goods will be subject to the same influence. In this case, however, the increase in the expenditure of Americans, when measured in terms of dollars, is independent of the rate of exchange, and, hence, *DD'* will be moved bodily away from *OY*, but will not, *ceteris paribus*, be distorted in shape.

The blades of the scissors, therefore, will tend to cut sooner than the intersection of *DD'* and *ss'* suggests, for there are now new blades pivoted together at a more favourable mark exchange rate. The question is how far the new blades are situated from the old—how

far does DD' tend to move from OY and SS' to move towards OY when reparation is being received and paid.

Some little can be said to answer this question. If the reduction in the expendable incomes of Germans affects only the demand for American goods and leaves unaffected the demand for German goods, then SS' will move towards OY by exactly the same distances that separate at each rate of exchange SS' from ss'. In which case, the rate of interchange will tend to move in Germany's favour. If the increase in American expenditure due to reparation receipt has as its only effect an increase in the demand for German goods then, again, the rate of interchange will move against the reparation receiving country.

But, in fact, neither of these simple results are likely to follow in the absence of political interference. The effect on the rate of interchange will be the resultant of two variables. The first, the manner in which the reparation payment is raised in Germany and distributed in America: the second, the class of goods purchased by Germans from America, and by Americans from Germany. If, for example, the payment is raised by the taxation of the poorer members of the community to be distributed among the richer members of the other community, and if German purchases of American products are composed largely of foodstuffs, while American purchases from Germany are composed to a large extent of mechanical and capital goods specialities, it is quite conceivable that the terms of trade will swing in Germany's favour. On the other hand, if the money be raised from the poor to be distributed by means of state payment for constructional work, and if Germany's imports from America consist of capital goods and luxury articles for the comparatively rich, while America's German imports consist of foodstuffs, then, in all probability, the terms of trade will swing very much in America's favour.

The criterion, then, appears to be the possibility or likelihood of a considerable alteration in demand for the imports from each country being brought about by the curtailment or augmentation of the expendable incomes of the classes most affected by the payment and receipt of reparations. In so far as it is difficult to tell what taxation is the result of the necessity for reparation payment and what classes are specifically benefiting by reparation receipt, and in so far as many commodities offering widely different appeals to widely different tastes enter into trade between the two countries, the criterion is of little practical value. It remains to be said that the

alteration in the terms of trade is a dependent variable, both in sense as well as in magnitude, and both these are indeterminable, though not, of course, indeterminate, in the present state of knowledge.

The remainder of the volume is composed of essays and addresses covering a wide range of subjects. He will be hard to please who does not find something to delight him in this collection, though it is to be admitted that he will be even harder to perplex who does not find the going in places extremely difficult, for if Professor Pigou is the surest of guides he is also one of the most exacting. And if one has the eye on the goal and not on the road it is to be feared that the greater is the difficulty the less is the reward. It is unfortunate that in the article on " The Statistical Derivation of Demand Curves " the difficulties are increased by the exposition and the presence of minor errors, so that the use of a method of essential simplicity and aptness is converted into arduous intellectual task.

J.S.

Economic Disarmament. By J. H. RICHARDSON. (Allen and Unwin. 1931. 7s. 6d.)

PROFESSOR RICHARDSON presents a dispassionate survey of some of the more important causes of friction in international economic relations. The first half of the book is concerned with the effects of tariffs and the measures that can be taken to obtain greater liberty of trade. One chapter is devoted to the development of international forms of industrial organisation. Similarly, the effects of wages and hours of labour and the disorganising effects of monetary instability in this sphere are traced.

The growth of tariffs is outlined, the reasons for that growth clearly presented, and the position to-day sketched, but little reason for satisfaction is seen in the picture painted. The author brings out in a most lucid way the harmful effects of tariffs on international trade and political relations, showing that the barriers are an effect of nationalism, and that their presence is thus a two-fold obstacle to the evolution of a more corporate spirit among nations. This part of the work forms a concise introduction to the study of the effect of tariffs not on one community but on all. That some loop holes are left in the defence of free trade must be explained by the scope of the study that Professor Richardson has chosen, for his general defence is admirably planned.

With the same object in view the dangers of disparate labour

conditions are outlined: unfair wages and unduly low wages in one country may bring a downward pressure to bear on the standard of life of workers in other countries. Although what is written is to the point the real difficulty of this section is avoided. There is little indication of what in the author's opinion constitutes a fair wage, and the indications found are not altogether consistent or acceptable. Apart from omissions which the general reader will not miss, little criticism can be levelled against a book that so admirably fulfils its purpose even though it does not draw attention to matters commonly overlooked.

J.S.

Lancashire and the Far East. By FREDA UTLEY. (Allen and Unwin. 1931. 16s.)

EVEN if it is not clearly indicated in the title, most people would rightly assume that this book is mainly concerned with the position of the cotton industry in Lancashire and in the countries of the Far East. Miss Utley's credentials for writing it are that she began her study of the industry whilst holding a Ratan Tata Research Studentship at the London School of Economics and that she has paid a nine months' visit to Japan, from whence she contributed articles to the *Manchester Guardian Commercial*. In her introduction Miss Utley further informs us that she began the study of her subject " with the idea that just as in the ancient world free labour was crushed by the competition of slave labour, so in the modern world the European workers, in some industries already, and in others possibly in the near future, are being thrown on the ' dole ' by the slaves of to-day." When anyone begins an investigation of the character undertaken by Miss Utley with an idea of this sort firmly embedded in his mind it is very unlikely that the investigation will do other than confirm the idea. Evidence that this statement has been verified in Miss Utley's experience is to be found throughout her book.

Unfortunately, the idea with which Miss Utley began her study poses an historical question, which certainly cannot be discussed within the limits of the space available here, and which, if it were discussed, might lead to different ideas from that which she holds. While it must be admitted that a piece of research undertaken with such an idea in mind may yield valid results, even a sympathetic

critic cannot help being conscious of the danger that the collection of the requisite material, and especially the interpretation of it, may be unduly influenced by a natural inclination not to weaken the idea.

Much of the statistical material which Miss Utley has collected bears upon the question of the comparative costs of production as between Lancashire and Japan, and it is probably quite impossible for anyone conclusively to prove or disprove the superior validity of either her comparisons, or of those of anyone else. In many cases, as Miss Utley admits, her comparisons differ from those of other enquirers, and it does not always carry conviction to suggest that they were misled, whereas she was not. To obtain information in a " roundabout " way ; " details of production from the engineer ; of numbers employed from the manager (and from my own observations) ; of wages paid from yet another member of the staff, and so forth, and subsequently to piece this information together " is not a method which suggests accuracy to anyone conversant with the difficulty of collecting information, unquestionably reliable for comparisons, even when facilities are given for its collection. This is far from an assertion that Miss Utley's general conclusions regarding costs in Lancashire and in the countries of the Far East are of no value, or from a denial that Lancashire is faced with an enormous problem which for some years has taxed, and which will continue to tax, all her resources. In resolving this problem into a question of comparative costs as between Lancashire and the countries of the Far East Miss Utley's work has a significance which no one in Lancashire can afford to ignore.

This brief notice can hardly conclude without some mention of Miss Utley's comments upon the wages, clothing, homes, and food, of Lancashire cotton workers, which, according to Miss Utley, indicate a standard of living which is " terribly low." To one who has lived in close contact with these workers all his life, these comments are so crude that it seems kindest to attribute them to the influence upon Miss Utley of the idea with which she began her study. Again, the use she makes of certain tables of earnings, and her references to the rates of profit formerly yielded by the Lancashire Cotton Industry, hardly suggest that when she held a Research Studentship at the London School of Economics she took full advantage of the facilities for training in research which one may assume were open to her.

G.W.D.

International Wage Comparisons. Documents arising out of Conferences, held at the International Labour Office in January, 1929, and May, 1930, convened by the Social Science Research Council of New York. (Manchester University Press. 1932. 10s. 6d.)

THE standardisation of information about wages in different countries is an essential pre-requisite of the international wage agreements which have become inevitable if the civilised world is to avoid sinking its standards of living lower and lower in a futile attempt to achieve cheaper and ever cheaper production. Modern methods of mass-production have made ridiculous the old boast of the high-wage countries that cheap labour was the dearest in the long run. On the contrary within limits it seems to-day to be usually the cheapest. The first step towards the standardisation of statistical information is to ascertain what figures are available in different countries and how far they are comparable. The scope of the collection of documents which form the subject of this review is limited to Canada, France, Germany, Italy, the United Kingdom and the United States, but, for these, the principal industrial countries of Europe and North America, the task has been done with exemplary thoroughness, and a firm foundation laid on which to build in the future. Work has, in fact, already been begun ; as a result of these Conferences, the International Labour Office has adopted several changes as the outcome of the suggestions which were put forward.

An admirable introduction has been contributed by Professor Henry Clay, who was prominently concerned with both Conferences. He goes briefly over the whole of the ground covered, including the work of Professor Gini of the Italian Central Statistical Institute on the Committee on Wage Index Numbers, and of M. Dubreuil on the Committee on International Wage Comparisons, and outlines the chief difficulties facing the investigators. The main collection of documents includes the resolutions and recommendations of both Conferences, chiefly with regard to index numbers of wages, and the national reports presented to the Conferences describing the existing material on wages and working hours in each of the countries represented, together with memoranda presented by the International Labour Office on international comparisons of wages The last and by far the most interesting and informative part of the volume consists of a report by Mr. John Jewkes on the existing

wages and cost of living material in each of the countries represented at the Conferences.

The introduction to Mr. Jewkes' report goes straight *in medias res* by discussing the possibility of constructing a general index of hourly earnings in industry in each country. Mr. Jewkes seems inclined to take a more pessimistic view of the practicability of this than appears to be warranted by the facts as shown in this volume. In the first place it is pointed out that the industrial structure of each country differs widely from the others, and that comparisons of one country with another are thereby made very difficult, as the chief variations occur in the proportion of the population engaged in agriculture, and a large part of agricultural work falls outside the field of wages payments altogether, while, even where wages payments are made, comparisons are liable to error on account of the prevalence of payments in kind and similar disturbing factors. The same considerations apply of course to distribution, and Mr. Jewkes concludes that comparisons must be confined to industry only, to which however, transport might be added. The drawback in this is rather an academic one for the economist, who wishes to know whether the average standard of living of one country is higher or lower than that of another, than a practical one for the industrialist, who wishes to compare his own wage rates with the wages paid by competitive concerns operating abroad.

The proper approach to the problem of international wage comparisons is surely from the individual industry upwards, and in fact useful work has been done along these lines by the mining industry in several countries of Europe. The co-operation should be sought of motor manufacturers, for example, and similar groups of industrialists and their trade organisations in the countries over which the comparison is being made, and the results should be checked with the figures which could easily be provided by the trade unions concerned. Only in this way will the volume of detailed information necessary as a basis for international wage agreements be made available within a reasonable period of time.

C.T.B.

THE BALANCE SHEETS OF THREE LIMITED COMPANIES IN THE COTTON INDUSTRY

I

THE three companies whose balance sheets form the subject of this article include two engaged in spinning and weaving and one engaged in spinning only. The first two companies may be distinguished as A and B and the third company as C. For A company, there are half-yearly balance sheets extending from October, 1879, to September, 1908, also a winding-up account, and for B company, similar balance sheets extending from October, 1877, to March, 1908.[1] Judging from the amount of depreciation which had been allowed when the balance sheets become available, it may be safely assumed that both the companies came into existence in the 'sixties, and consequently were among the earliest of the limited companies in the Lancashire cotton industry. Immediately after the close of the American Civil War, several of these companies were formed, and paid large dividends, which led, in the early 'seventies, to what was described as a "floating mania" which received a check in the depressed years 1876–79.[2] It is in this depressed period that the available balance sheets of A and B companies begin.

The balance sheets of the two companies are closely alike but may be dealt with separately. In 1879 the share capital of A company consisted of 3,996 shares of £5 each but, on the assets side, there was an item for shares purchased which, when it was extinguished in 1883, reduced the share capital to 2,800 shares of £5 each, at which it remained until 1908, when it was decided to wind up the company. In addition, there was a mortgage loan of £5,125, which remained unchanged in amount between 1879 and 1903, when it was reduced to £5,000, and so continued until 1908. Besides, there were ordinary loans, on occasions falling in amount towards £2,000 and rising to nearly £3,500, but usually varying between about £2,500 and £3,000. Only in the last few years of the company's existence do the ordinary loans show signs of a permanent

[1] For the period given, two balance sheets of A company are missing; for B company they are complete.

[2] Ellison, *Cotton Trade of Great Britain*.

decline : in 1908 they amounted to only £400. Again, not until 1907 is there any mention of a bank in the balance sheets of the company. To a large extent its place was occupied by cloth agents, who made advances as required, sometimes being in credit with the company for more than £3,000, though usually for smaller amounts, and less frequently in debit, though rarely for more than £1,000.

The balance sheets of the company were composed of three parts (*a*) general trade account, (*b*) profit and loss account, (*c*) general balance. The debit side of the trade account included stock-in-hand at the beginning of the half-year, cotton and yarn purchased, and detailed working expenses of which wages accounted for nearly fifty-six per cent. In every balance sheet except eight, depreciation was allowed and included in working expenses, but interest on loans did not appear in the trade account, but in the profit and loss account. The credit side of the trade account included sales during the half-year, and stock-in-hand at the end. Presumably the output of the company was disposed of mainly through the above-mentioned cloth agents, thus explaining their advances. For the period 1897–1908 the average half-yearly sales were about £15,500, not often falling much lower than £14,000, and rarely rising beyond £17,000. Of these sales, cloth accounted for about three-fourths, and yarn and waste for the remainder, while, as just mentioned, small quantities of yarn were purchased. Clearly, if the balance of the trade account appeared on the debit side there was a gain on the account which might be greater or less than the interest to be paid on loans ; if the balance appeared on the credit side there was a loss on the account, with interest on loans still to be paid, the result being revealed in the profit and loss account. In the general balance, the liabilities and assets of the company were given, the most important items of the liabilities being share capital, mortgage and ordinary loans, and advances by cloth agents ; and, of the assets, the value set upon buildings, machinery, stores, and stock-in-trade. Here again, if the balance appeared on the liabilities side, a surplus was shown, if on the assets side, a deficiency. It will be apparent, therefore, that, for a long period, although the company might always make a gain on its trading account, there might be an increasing deficiency, or one varying in amount, on its general balance. Even so, all that was required for the company to carry on was for the loans to be continued and for the cloth agents to make requisite advances. Certainly, no dividend would be paid on the share capital but, so long as the company continued

to exist, the shareholders might live in the expectation that sooner or later one might be paid.

Altogether there are fifty-six half-yearly balance sheets available. Ignoring any payment of interest on loans, the trade account shows a gain on forty-one occasions, and loss on fifteen ; if the payment of interest on loans had been included, a gain would have been shown on thirty-one occasions and a loss on twenty-five. As regards the general balance, the first available balance sheet (March, 1880) shows a deficiency of £5,305 which, with fluctuations, tended to decline until, in September, 1891, it became a surplus of £47, and in September, 1892, of £226. Then came another series of deficiencies until a surplus of £266 was recorded in September, 1895, when the shareholders received a dividend at the rate of $1\frac{1}{4}$ per cent. per annum, this being the only dividend paid by the company between 1879 and 1908, and probably for some years before 1879. This was followed by another series of deficiencies on the general balance, which changed to small surpluses in 1899 and 1900 but, in September, 1903, the deficiency had reached the sum of £3,105, the advances of the cloth agents amounting to £3,494. At this time the agents apparently decided that it was unsafe to continue their advances, for only in one other half-year do they appear in credit with the company, and then for a sum of only £497. Also, at this time, the mortgage loan was reduced from £5,125 to £5,000, while ordinary loans declined until, in 1908, they amounted to £400. In September, 1908, the deficiency on the general balance was given as £4,001 and a notice was issued stating that a special general meeting was to be held " to take into account the present position of the company."

In March, 1880, the buildings and machinery were valued at £15,300 ; in September, 1908, at £13,602. During this period depreciation had been allowed to the amount of £15,570, offset to the extent of nearly £14,000 for additions. When the assets were realised, however, the buildings and machinery brought in a sum of only £2,500, creditors for £5,429 receiving a first and final dividend of 8s. 3d. in the £. These creditors, presumably, were the mortgage and loan holders so that, during a period of more than thirty years the shareholders, as such, received one dividend on their capital and, at the end, nothing. But perhaps of wider interest is the indication which the balance sheets give of the length of time for which a limited company, equipped with fixed capital, and able to obtain a sufficient amount of fluid capital, may endure losses

on its trading account before it is compelled to close down. In this respect the balance sheets are not without significance in a consideration of the position in the Lancashire cotton industry at the present day.

II

As already mentioned, B company, like A company, was engaged in spinning and weaving, indeed, its title also included mining, but there is no evidence that this line of enterprise was pursued. The company was, however, owner of cottage property, valued in the first available balance sheet (March, 1878) at £9,990, which, during the next thirty years, yielded an average net income of about £335 per annum. Throughout the period the share capital of the company remained unchanged at 2,147 shares of £10 each, but, again, there were mortgage and ordinary loans, the former, between 1879 and 1897, varying little from £10,500, then gradually diminishing until they disappeared in 1905. In 1878, ordinary loans amounted to nearly £19,000, but, within the next three years, this amount was reduced to below £10,000, with a tendency to a further reduction, especially in the years 1885–88, when the amount was less than £6,000. Then came an increase until 1904, followed by another reduction so that, in 1908, the amount of ordinary loans was £6,200. Just as in the case of A company, there is no mention of a bank in the balance sheets of B company until 1904. The cloth agents were again present, evidently prepared to make advances, which were required only in the three half-years 1885–86. In September, 1885, cloth agents were in credit with the company for £3,537 but, during the other fifty-eight half-years for which there is information, they were in debit for amounts ranging from £230 to more than £12,000.

The half-yearly balance sheets of B company were constructed like those of A company and contained similar items but, after 1880, B company included interest on loans in its trade account. Wages, in this company, accounted for about fifty-four per cent of working expenses. Between 1877 and 1908 the average half-yearly sales were about £23,500, the actual sales usually varying between £20,000 and £25,000, although in rare instances they fell as low as about £15,000 and rose to more than £30,000. In the first ten years cloth sales were about ninety-seven per cent. of the total; in the second ten years about ninety per cent.; in the last ten years about eighty per cent.; the remainder consisting of yarn and waste and,

as might be expected, as yarn sales increased, yarn purchases also increased. Although, so far as dividends are concerned, B company had a more satisfactory record than A company, its trade balance (interest on loans being included) was adverse in twenty of the sixty-one half-years for which balance sheets are available. Between 1877 and 1886, only in 1882 and 1883 were dividends paid (at the rate of 2½ per cent. per annum), and it was not until 1886 that the general balance of the company became permanently favourable. After 1886, several half-years, but only one complete year (1894) passed without a dividend, which was sometimes as low as 2 per cent., and only in one year (1906) as high as 10 per cent. Between 1877 and 1908 dividends were paid in thirty-eight of the sixty-one half-years, yielding an average dividend for the whole period of 4 per cent., the cottage property owned by the company providing £335 of the annual £857 required to pay this rate of dividend. When the last available balance sheet was issued (March, 1908) the general balance was again adverse to the extent of £1,267, the company's bankers having advanced £1,276 but, as the liabilities included a reserve fund of £2,250, the position of the company, in view of the experience of the last thirty years, was perhaps not to be regarded as serious.

III

As contrasted with A and B companies, the peculiar interest of C company lies in certain features, on its financial side, which reached their highest development in pre-war days in the large companies in the Lancashire cotton industry engaged in spinning only. The larger part of the capital of A and B companies consisted of fully-paid shares, the remainder, apart from the advances of cloth agents and bankers, consisting of mortgage and ordinary loans with the mortgage loans in larger proportion. As is revealed in the balance sheets of A and B companies, these ordinary loans were provided by persons who dealt with the companies much as with a deposit bank: they deposited and withdrew their money, were supplied with pass books, and on their deposits received a fixed rate of interest. How these features were further developed in large spinning companies in pre-war days can be stated in a few words.

If, say, £100,000 were required to establish a spinning mill, a company would be formed with a nominal capital of about that sum, usually in shares of £5 each. Probably not all the shares would be issued, and they would be paid up only to the extent of, say, £2.

Apart from any temporary advances of bankers, the remainder of the capital required—perhaps, at the outset, more than two-thirds of the whole—was obtained, not by an issue of debentures, or by mortgage loans, but by a large number of people contributing to the loan account of the company. On these loans a comparatively low fixed rate of interest was paid, the contributors having the right to withdraw their loans at any time on giving short notice, unless they had agreed to deposit them for a given period, when a higher rate of interest would be paid.[1] The security of these loan-holders was simply that of an ordinary creditor of the company, but the mill and the uncalled share-capital were regarded as sufficient, and, in pre-war days, loan-holders rarely suffered loss either on interest or on capital.

Another feature of the system was the opportunity which it offered for a utilisation, within the company, of its depreciation allowance. Immediately the mill started operations this allowance would begin to accumulate, whereas extensive replacements would not be required for many years. Consequently, after a time, the loan account of the company would be closed, and the depreciation allowance used to pay off existing loans which, seeing that, if required, the loan account could be re-opened, and that a successful company would have no difficulty in obtaining new loans, was equivalent to an investment of the depreciation allowance at the rate of interest paid to loan-holders. Evidently this loan-money system was one which enabled the cotton industry to obtain a large part of its capital at comparatively low rates of interest on the guarantee of shareholders who, in return, received dividends according to the success of the companies in which they were interested. But the weaknesses of the system are obvious and, many years ago, it was criticised as a " fair weather method of finance " a criticism which would probably be more widely accepted now than at that time.

For C company there are quarterly balance sheets, extending over the first twenty-one years of the company's existence, and, in them, all the above-mentioned features are present.[2] The articles of association were adopted in May, 1884, and the first working balance sheet was issued in December, 1885, when the directors stated that the mill buildings were finished ; that the card-room

[1] A loan-holder, who was not a nuisance, could usually withdraw a small amount without notice.

[2] The balance sheets are complete except for 1887, part of 1888 and two quarters of other years.

was three-fourths filled; that twenty-two pairs of mules were running; and that the machinists were being pressed to complete the machinery as quickly as possible. The nominal capital of the company was £100,000 in 20,000 shares of £5 each, the issue being 12,666 shares on which 30s. had been paid, which was increased to £2 in the next two quarters. In 1892, however, by a bonus sale of shares, the issue was increased to 14,000 shares and the share capital to £28,000 at which they remained throughout the period of the available balance sheets.[1] In the first balance sheet, a notice stated that the company was open to receive loans on which interest at the rate of 4½ per cent. from the day of deposit would be paid but, six months later, except for loans for a term of three years, the rate was reduced to 4 per cent., and shortly afterwards to 3½ per cent., which rate operated until March, 1891, when there was an increase to 4 per cent. and, in September of that year, the loan account was closed. In December, 1888, the loans amounted to about £49,000, and in December, 1885, to about £59,000, after which each year saw a decline, until, in 1905, loans ceased to be an item in the company's accounts.

Between 1885 and 1899, the balance sheets of C company were similar to those of A and B companies, except that the general balance was named capital account. In the trade account, nearly thirty items of expenditure were given, but, in 1899, most of these items were brought together under "trade expenses," so that the total number of items was reduced to about six. Interest on loans, and depreciation (at the average rate of £800 a quarter), also occasional charitable donations and subscriptions to trade organisations were included in the trade account. Over the whole period (1885–1906) wages accounted for rather more than fifty-one per cent. of working expenses, the percentage for the first half of the period being rather lower than that for the second half. At first, the company had seven directors, whose collective quarterly remuneration was £35 but, in 1890, the amount was increased to £52. 10s. which remained unchanged when, in 1897 and 1898, death caused two vacancies which were not filled.[2] In 1905, the collective quarterly remuneration of the five directors was again increased to £65 a quarter and, in the following year, the auditors' quarterly fee, which, since 1885, had been £4. 4s., was increased to £6. 6s.

[1] Apparently the 1,334 shares were sold for a total sum of £819. 12s. which was added to the reserve fund.

[2] As early as June 1886, a notice of motion was given "that the number of directors be reduced to five."

The average quarterly sales of yarn and waste,[1] between 1885 and 1906, were about £24,600, the actual sales in a few quarters falling to about £20,000 and rising beyond £30,000.[2] Of the seventy-six quarters for which balance sheets are available, dividends were paid in seventy-three of them, there being no omissions after the fifth quarter of the company's working existence.[3] From the March quarter, 1890, to the June quarter, 1894, dividends were paid at the rate of 12½ per cent. on paid-up capital, and in all the succeeding quarters at the rate of 10 per cent. In addition, in June, 1905, a bonus of 1s. 6d. a share was paid, which was said to make the dividends equal to 10 per cent. from the commencement of the company's operations, and in September and December, 1906, there were two further bonuses, one of 5s. and the other of 4s. a share. This regular payment of dividends does not mean that, in every quarter, the trade balance was favourable to the extent of the amount of dividend paid. Actually, this balance was less in twenty-two quarters, a loss being recorded in seven of them. On these occasions the position was met by less than usual being placed in the reserve fund or by its being drawn upon. In only six odd quarters of the seventy-six was the company in debit with its bankers.

In the last available balance sheet the reserve fund contained £15,000, the capital account was favourable to the extent of £3,600 and, of the assets, the shares held in a Cotton Buying Company, in the British Cotton Growing Association, and in the Manchester Cotton Association, were treated as of no value. On a consideration of the balance sheets of C company, during the first twenty-one years of its existence, it is not surprising that shares in a large spinning company in the Lancashire cotton industry were, in pre-war days, regarded as a good industrial investment.

G. W. Daniels.

[1] Waste sales amounted to £300–400 a quarter.

[2] In the March, 1893, quarter the actual sales were £11,431. This was the time of the dispute which was ended by "the Brooklands agreement."

[3] Besides the company not having got fairly under way, losses were general in the cotton industry in 1885 and 1886.

THE ECONOMIC LIMITS TO EXPENDITURE ON SOCIAL SERVICES[1]

On two occasions since the war Parliament has abdicated its historic function of protecting the tax-payer, and allowed the Government of the day to appoint an unrepresentative committee to perform that office for it. Members of Parliament are more interested in particular items of expenditure, for which it is nearly always possible to make a case; the Geddes and May committees were concerned with public expenditure as a whole, which Parliament had proved unable to envisage and control. In appointing such a committee a Government is shirking its responsibility, and whatever criticism may be made against the committee's recommendations should, in reality, be directed against the Government. This appointment of committees to show how economies can be obtained, suggests that Governments and Parliament have no clear principles to follow in regulating public expenditure, and the controversy surrounding economy reports shows that the public is equally vague in its ideas. Economy, in the narrow sense of keeping expenditure down to the lowest figure compatible with the efficient performance of the functions of government, is an obvious requirement: but what are the proper functions of government in this connection? Finance depends upon policy, and neither Parliament nor the country is in general clear in its own mind on the policy it wishes to pursue.

In order to attempt any answer to the question, what are the economic limits of social services, it is necessary to have a definition of social services. I suggest that for a general enquiry of this sort social services may be defined as including all forms of provision designed to supplement the deficiencies and repair the failures in the economic provision made by the commercial organisation of industry. In the main, in modern communities we rely for the satisfaction of our wants on the spontaneous provision made by private, as distinguished from public and charitable, enterprise in response to market demand; but this provision leaves unsatisfied a large number of needs, which society is not content to leave unsatisfied. These constitute the field of social services.

[1] The substance of an address to the International Conference on Social Work, Paris, 1928.

It is obvious from this definition that the limits to social provision in any community, in which the economic organisation yields a surplus over immediate necessities of existence, are moral and political rather than economic. Society will use the machinery of Government, or other organs of its will, to supply services for which the recipients do not pay, or to compel the provision of them by industry irrespective of payment, only in so far as there is a general agreement in society that the provision of them is necessary. Recent social legislation in England finds an ample theoretical justification in the philosophical theory of the State propounded by T. H. Green and Bosanquet in the generation before the decisive measures were passed. The Insurance Acts, for example, are an example of the principle that law is the expression of the citizen's own better judgment or real will. In as much as everyone's real or rational will is to distribute resources in such a way as to get the best return from them throughout his life *as a whole*, he will wish to provide for sickness, unemployment, and other interruptions of earning, and the law, by compelling and assisting him to do so, helps him to realise his own will. Moreover, since such provision is a condition of any real freedom, the law, in Rousseau's paradoxical phrase, "compels him to be free." Historically the State Insurance scheme is merely a generalisation of the provision that was made spontaneously by voluntary action through Friendly Societies and trade unions, so that the State was following the expressed will of the more thoughtful members of the class subjected to the law; since, however, the new provision was extended to the lowest paid members of the class, who might not by themselves have been able to meet it, the State subsidised as well as compelled it.

A similar explanation is applicable to the whole scheme of social provision built up in the last generation. It is not the real will of the great majority of citizens that any of their fellow-citizens should starve in old age, lie neglected in sickness, or lack the rudiments of education. If that is so, since provision for these needs costs money, it is a reasonable inference that it is the will of the great majority to contribute according to their ability towards the cost of meeting them. The taxation involved in social legislation, therefore, is a payment, which the tax-payer himself wills. Unemployment Insurance is intermediate between the two kinds of provision. In form it is compulsory insurance like the sickness insurance scheme; but unemployment is not an unavoidable and unbiassed risk, so that strictly the scheme with its present scope is not insurance.

By a convenient confusion of thought, however, it is treated as such, and the compulsion upon the good workman who is seldom out of work to contribute to it, is accepted by him as reasonable, because he does not wish his less fortunate fellow-workmen to be unprovided for, and his contribution is necessary to the scheme.

While, however, the important limits are political, it follows equally from our definition that there is an economic problem involved. Social work is contrasted with commercial work. The commercial provision of services limits itself. A business man may regard his business as a form of public service, and be guided in his conduct of it by that conception ; but so long as he is compensated for his expenses by the price paid by the consumer of his product, and confines himself to work that " pays " in this way, his work falls outside our definition. He carries production to the point at which the price he receives just covers his costs, and the purchaser in the market carries his purchases to the point at which their value to him is just balanced by their cost. The balancing of expenditure against returns goes on continuously without any intervention by the State, and expenditure on the supply of services is automatically confined within limits set by their market value. In the case of social services there is no such automatic limit ; since they are supplied independently of payment, we do not have their value measured for us. We have, therefore, to find some other principle of limitation, and this constitutes the economic problem.

Public social services do not cover the whole field of social work ; but it is only in connection with them that the practical problem of economic limits arises. Part of the field is covered by voluntary charity, part by various forms of co-operative provision. The limit to voluntary charity is set by the will of the charitable. We may, however, note that the scope of voluntary charity, which incidentally helps to determine the need of public provision, varies with the social constitution of different countries. Where the distribution of income is most unequal and there is a considerable leisured class, voluntary charity is likely to play an important part in social provision ; and the charity is likely to be more organised than it is in a society of peasant proprietors or a North Country manufacturing village, just because organisation is needed to bridge a gulf between the individuals in society, which does not exist in the latter community. Again, the possibility of voluntary charity meeting the whole of society's need paradoxically is least where voluntary charity is forthcoming in the greatest amount. It is

forthcoming most where there is most inequality of incomes and the largest leisure class; such inequality and the existence of such a class are characteristics of an advanced industrial or capitalistic society. It is also a characteristic of such a society that the dependence of the individual upon society is greatest, and the consequences to the individual of any maladjustment are most serious.

Similarly, the limits to the scope of co-operative action, in the special sense of the term co-operation, raise no practical problem for our present purpose. So long as it is voluntary—the compulsory co-operation of Russia and elsewhere does not seem to me to be co-operation at all—it limits itself in much the same way as the commercial provision of goods and services is limited. The beneficiaries are the members, and they decide for themselves whether the benefits are worth the trouble of maintaining a co-operative organisation. This is not to suggest that there is not great scope for self-sacrificing public service both in running the co-operative movement and in extending it; but economic limits do not determine the amount of this service. Nor does such service necessarily differentiate co-operative from commercial industry; there is equal scope for public spirit in commerce. The problem of the economic limits to social action, therefore, narrows itself down to the public provision of services that the recipients cannot or would not pay for in the commercial field.

Now although the individual beneficiary will not or cannot pay for such social provision, there is presumably a return to the expenditure involved. Social provision is made, because in the opinion of a sufficiently large number of people in the community the services ought to be supplied and will not be supplied by private or commercial provision; in other words, because the individual balancing of expenditure and returns on the market will not secure the exact adjustment of resources to wants, which society approves. But the problem of economy remains. Somewhere and somehow, there must be a balancing of expenditure and returns; and the State, by providing the services itself, instead of leaving private industry to supply them to those people only who are prepared to pay a remunerative price for them, saddles itself with the difficult task of doing this balancing. Since the cost is found very largely by taxing one set of individuals, while the immediate and direct benefits are enjoyed by another set, the State finds itself compelled to compare the cost to the tax-payer with the benefit to the recipient. That is a

reason why the ultimate limit to social services must be political, not economic; there must be general agreement that the services are necessary, or it will be impossible to raise the taxation needed to finance them; but within this ultimate, political, limit, it is possible to analyse rather further the process of balancing expenditure against returns.

It is clearly impossible for a Government, or any other agency, to compare directly one man's sacrifice with another man's benefit. The most that a Government can do is to consider the external and visible results of different financial allocations. So far, then, as there is any balancing of expenditure and returns in social legislation, what the Government does is to consider the general results of increasing or contracting certain social services.

II

It will assist our enquiry if we ask ourselves first what limits the State observes at present. These may not be the limits that we shall finally lay down, but they may serve to indicate the factors that have to be taken into account. In practice, it would seem the State restricts its expenditure in social services by reference to standards which commercial industry sets. Leaving social services out of account, a man's consumption is limited by his income, which in turn depends on the services rendered to production, directly by his labour or indirectly by his capital. Thus wages are tied to and limited by the productivity of labour, which in turn is a function of the productivity of industry as a whole. The standard of consumption or expenditure of the wage-earning class, being set by their wages, is thus automatically related to the capacity of industry. This standard the State accepts. Relief scales and rates of benefit are generally kept below the level of full-time earnings of a labourer; if they are raised above them, there is usually active criticism and protest. This standard is an obvious limit to work to, because so much social expenditure is supplementary to earnings, being directed to meeting in cases of unemployment, invalidity, or other causes, the gaps in the provision normally made by earning. It would not misrepresent recent English social legislation to say that its general effect was to secure to the whole population at all times the standard of life that the lowest paid labourer (and his family) enjoy when the labourer is in work. This limit has not been reached in every direction, because the policy has been applied piecemeal and without co-ordinated consideration.

But the limit would probably be generally approved, while similar general approval would not be forthcoming to a more generous standard of provision.

By working to this limit the State can make sure of limiting its social services to what industry can bear. The wages which it takes as a guide are being paid; they can presumably be taken as representing a standard which industry can afford. Social services, which are subordinate and supplementary to this commercial provision, can safely therefore guarantee to all the minimum which the great mass already command, and secure to him all the time the sort of income that the worker receives when he is well and in employment. Moreover the minimum will rise as society gets richer; because the wage standard on which it is based is not a fixed and invariable thing, but an amount constantly re-adjusted to the capacity of industry. On the other hand, if wages are maintained by trade union or Government action above the level which industry can afford, automatically the social services all become correspondingly burdensome.

In practice, then, the economic limits of social legislation are indicated by the wage which the country's industry can pay the mass of the workers in industry and provide employment for them; and, so long as social provision is merely supplementary to commercial provision, the limits are set for the State, not by the State. This commercial standard is accepted even more definitely, when the State provides for social need, not directly, as in the case of poor relief or education, but indirectly, by making the provision a compulsory condition of private industry. Thus the State may decide that a legal minimum wage should be guaranteed to every worker in industry; it can impose that condition upon industry, not specifying any wage, but setting up appropriate machinery to fix a rate that industry can pay and leaving industry to adapt itself to this new condition. Or the State may decide that provision should be made by compulsory insurance for the wage-earner's income in old age, sickness, and unemployment. By legislation of this sort the State determines the form, but does not necessarily in the long run affect the amount of wages. It requires that the total remuneration of the wage-earner shall be so distributed over life that it provides for him when he is unable to work, as well as when he is working; but it does not lay down that his total remuneration, wages and pensions or insurance benefits taken together, shall be any particular sum. This aggregate will be determined by influences

that determined wages before the State interfered, by the general relations of the supply of and demand for labour and the influences affecting these.

To this commercial limit, however, there are exceptions. Public education and public health provision are not limited to the sort of provision a labourer might pay for himself. The elementary education that is compulsory costs the State and Local Authority much more per child than most wage-earners could think of spending on their children, had they to bear the cost themselves. What alternative economic limit is observed is not obvious ; in some way or other the benefits to society as a whole are balanced against the inconvenience of the taxation required, and the present compromise obtained, which satisfies neither the educationalists nor the critics of public expenditure. Similarly with public health provision ; there, expenditure is, in theory at any rate, carried to the point at which the provision is effective, and the cost shouldered whatever its amount. In matters of public health it is apparently felt that the economic waste of ineffective provision may be so great, that any expenditure required to ensure effective provision will be economically justified.

This difference in the attitude of Government to different kinds of social provision is significant. In the one case it is considered dangerous to exceed the limit set by the standard of the lowest commercial wage ; in the other it is considered safe to ignore the commerical standard. The distinction points to a distinction in the benefits expected from social legislation, which is important when we come to consider the theoretical limits to social legislation imposed by economic considerations, as opposed to the limits observed in practice. Let us now consider these benefits.

The benefit, which society expects to secure from social provision of the type of unemployment insurance, poor relief, and relief measures generally, is a better adjustment of income to need. In effect, these measures, taken with the taxation needed to finance them, tend to equalise the distribution of income by transferring from the rich to the poor. This must tend to increase the aggregate satisfaction derived from the social income, since it curtails the consumption of the rich on superfluities and luxuries, and uses the resources so released to meet urgent needs of the poor. The sacrifice imposed on the taxpayer, therefore, is likely to be less than the benefit conferred on the recipient. If the State considered only economy in consumption, this process of transfer could be carried to the point at which real incomes throughout the community were

approximately equal, since it would not be until that point was reached that the direction of productive resources to meeting wants was uninfluenced by differences in the ability of individuals to back their claims upon these resources with the offer of payment; but the reactions on production have to be considered.

The immense gulf between the existing provision of social services and such equality should warn us that it is not possible to consider distribution and the maximising of the satisfactions of consumption alone. Even if the political limit to the extension of social services did not fall far short of equality, there are economic limits, in the reaction of social services upon production, and therefore upon the magnitude of the income to be distributed. The present distribution of income is not arbitrary, even though some elements in it have no functional justification. Differences in ability to serve the community provide an economic justification for a good deal of the inequality. Progressive taxation, therefore, if carried far enough, will have a repressive effect upon production, either reducing it, or checking the growth which would otherwise take place. Not only the taxation to finance social services, but the provision of the services themselves, may have unfavourable reactions upon the volume of production. The influence will be determined by the form as well as by the amount of the social provision; but it is clear that anything that discourages independence, and encourages dependence on social provision, may tend to reduce production. This was the danger that the 1834 Poor Law Commissioners pointed out; the limit to social expenditure in their view was set by the principle that the condition of the person relieved should be less eligible than that of the lowest-paid independent worker. The effect of social expenditure upon production, therefore, must be taken into account, as well as its effect upon consumption; and the theoretical limit may be defined as that point at which the advantages of greater equality in consumption are just balanced by the disadvantages, which interference with the present distribution of income may involve to production. This is the economic limit.

III

So far we have considered only services of the type of poor relief, and have seen that existing practice observed a distinction between these and services of the type of education and public health. What is the relation of our theoretical limit to

these ? The limit would seem to be applicable, with a modification in the form in which it is stated. The services we are now considering are services the neglect of which involve an obvious, if diffused and unmeasured loss. The expenditure upon them, therefore, if wisely directed, brings some economic return to compensate for it. In other words, the reactions of social expenditure upon production may be favourable as well as unfavourable. Therefore the limit, at which the advantages of greater equality in consumption are just balanced by the disadvantages to production of interfering with the present distribution, is an elastic limit and not a fixed point. A wise social policy may so increase the economic capacity of the population that the increased production due to this improvement outweighs any loss of production due to the repressive effects of taxation. It is this latter possibility that I wish to examine in the remainder of this paper.

I will refer first to the unfavourable reactions, other than those due to its cost and the burden of taxation that it involves, which social provision may have upon the productivity of industry. The danger, as has been said, is that to which the 1834 Poor Law Commission Report was directed ; the danger of making economic dependence more attractive than independence, to the people who have it in their power to be self-supporting. It is a real danger, and one that is relevant to contemporary social provision as much as to the provisions of the unreformed Poor Law. But we need not draw the practical conclusion drawn by the 1834 Commissioners, that public relief should be given only on terms that are deterrent. The conditions under which much social provision becomes necessary are themselves deterrent ; sickness and disablement, orphanhood and widowhood, even unemployment, are not likely to be sought for their own sake, so there will be a deterrent condition about them, even if the State attach an income to them. Hence the safeguards, on which the State will rely to prevent avoidable dependence, will be administrative, consisting in the attachment of conditions to relief, designed to define the need and restict relief to the need as defined, not the limitation of the amount of relief itself. The case of unemployment illustrates well the change in the attitude to public relief since 1834. In 1834 unemployment was attributed to personal causes ; since Sir William Beveridge's analysis, if not longer, it has been recognised to be a " problem of industry." Personal defect may select which of the workpeople in industry shall suffer unemployment, but the conditions of industry determine

that some shall be unemployed and how many ; we cannot therefore hope to cure unemployment by starving the unemployed. Social provision may lessen the mobility of labour, and by this influence and by restricting the employer's discretion in the matter of methods, may lessen the adaptability and resilience of industry. Apart from this, its unfavourable reactions are probably exerted through its cost ; and this, I have suggested, may in part or whole, be covered by, and certainly must not be considered in abstraction from, its economic returns.

To summarise the argument up to this point ; social services might be extended with economic advantage much further than is probably possible in the direction of equality of real incomes throughout the community, if the most advantageous *use* or consumption of wealth alone were considered ; it is, however, impossible to confine attention to this aspect of the services, since distribution is bound up with production, and the reaction of any redistribution through social services upon production has to be considered. In actual practice any danger of unfavourable reactions is avoided by restricting social services within limits that industry shows it can bear by the wages it pays without serious unemployment. But the reactions are not necessarily unfavourable, and the most important purely economic question in deciding on the limit to which social expenditure can be carried is the extent of the favourable reactions.

A conscious and deliberate attempt to set down in relation to each other the costs and returns of the social services is needed, because the commercial and the governmental organisation of society overlap and interlace, and it is a matter of historical accident or local convenience how the work of meeting the economic needs of society is divided among them. Since the public services are, however, for the most part not charged for by fees, the returns to them, which in the case of private concerns would appear as revenue, must be sought either in a lowered cost, or an increased output, of commercially provided services. The credit side of the account can be made up, therefore, of two series of entries : (i.) certain real costs of industry, which are borne, not by industry, but by the State ; and (ii.) certain real returns to State action, which are received not by the Exchequer, in the form of revenue, but by industry, or the consumers of the products of industry, in the form of an increased output of goods. The former are costs which industry would have to meet, if the State did not bear them ; the

latter are returns which industry would have to forego if the social services maintained by the State were curtailed or abolished.

IV

First then the real costs of industry. Industry incurs the costs of production and is compensated by the price of the product. If there were no social provision, it would be necessary that this price should cover all the costs and not only some of the costs ; otherwise economy would not be observed, some things being produced the value of which did not cover their cost. In so far as commercial production does not bear the whole of its costs, its balancing of costs and returns is imperfect ; the commercial balance is not a social balance. What, then, do the whole costs include ?

They include, in the first place, a wage sufficient to keep the labourer. Moreover, the labourer has to be kept throughout his life. The wage, therefore, must be sufficient, not only to keep the labourer when he is at work, but also to keep him before and after working life ; in other words, it must bear some relation to the cost of keeping a family. A wage that barely suffices to keep the labourer when he is working does not cover the cost incurred in bringing him up to working age, and provides no surplus on which he can live when he is past work. Even in working life, there are many interruptions to earning. Wages are lost through unemployment, accident, illness. A price that covered the real costs of production would provide for the wage-earner's expenses when he was unable to work. All of these costs industry does not meet ; some wages are probably insufficient to meet current needs ; many wages are insufficient to meet dependents' needs. In 1924 the State in Great Britain contributed towards meeting the needs of labour £41½ millions in Poor Relief, £24 millions in Old Age Pensions, £7 millions in contribution to Sickness Insurance, £13 millions in contribution to Unemployment Insurance, £9 millions in subsidy of Housing. It is unnecessary to accept the Subsistence Theory of Wages to believe that, but for these subsidies, industry would have had to pay more in wages ; I have shown elsewhere that the check to the rise in real wages in the last generation roughly coincided with the initiation of the policy of social legislation which led to the expenditure just cited[1].

But industry requires more than mere brawn and native intelligence in labour. It requires also, and economic advance is

[1] *The Problem of Industrial Relations*, pp. 240 *et seq.*

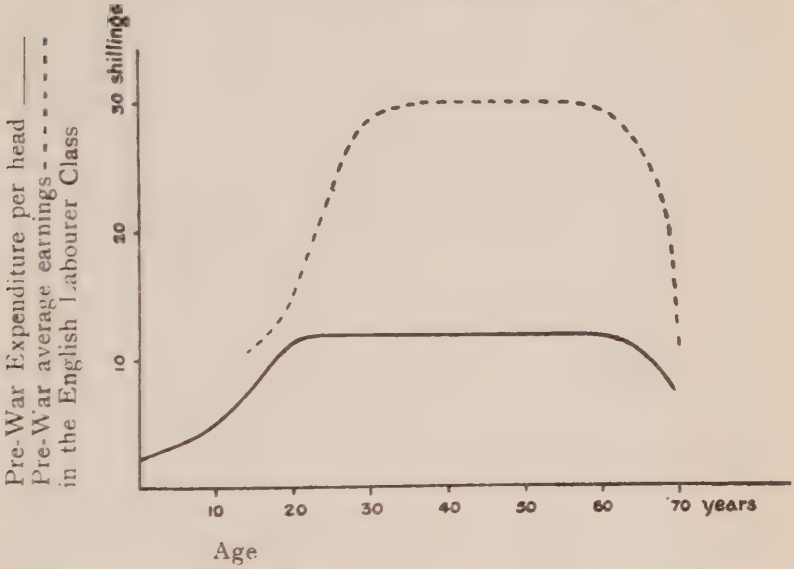
conditioned by, a certain level of intellectual attainment and adaptability. These qualities modern industry itself does not give to labour; it does not, for example, teach its employees to read, although it would be difficult to organise a large scale establishment on present lines if none of the employees could read. A part, therefore, of the public expenditure upon education is a necessary cost of industrial production; expenditure on technical education is even more clearly a cost of industry; another part may be debited against industry, since it is incurred in the endeavour to foster interests that may compensate for the monotony of industrial employment. Other costs, which the State bears, will readily suggest themselves. The maintenance of communications is borne by industry in the case of railways, by the State in the case of roads. The cost of sanitation and hygiene in a large aggregate of population is borne by the State, but is properly a debit against the economies which industry is able to secure by concentration of population. The emission of smoke by furnaces and factories involves remedial measures, the cost of which is borne by public authorities, while the smoke is the result of commercial production. A large part of the functions of the English Local Authority can be regarded as Overhead Expenses of private industry, which it is convenient to meet by public provision; that part, therefore, of Local Rates, that is distinguished as "beneficial" as opposed to "onerous," is a proper charge on industrial operations, and on a large view a good deal of the so-called "onerous" rates might be placed in the "beneficial" category.

Thus the price of commercial products does not necessarily cover their full cost. The State must, therefore, either intervene by regulation to compel industry to provide for the full costs—an alternative to which I will refer later—or make public provision for the needs that the commercial distribution of income does not meet. In the latter case the true balance of expenditure and returns will either credit the State with part of the returns to industry, or debit industry with part of the costs of the State.

Let us turn to our second head, the economic returns directly attributable to State action and public expenditure, which accrue to industry's credit in the form of increased or cheaper output. I can indicate the nature of these most clearly, if you will allow me to take a narrowly economic view of the life of man, and represent it with the simplicity of outline and economy of detail that diagrams

encourage. In the following figure I have plotted out the life of man, representing by the continuous line the expenditure on him

Diagram of Relations of Maintenance and Production.



and by the broken line the return from him. I have assumed that the expenditure is restricted to the regimen adopted by Professor Bowley as his Poverty Line[1], which varies with his age, and to the cost of education ; and that the return can be represented by the average wage of the Wages Census preceding Professor Bowley's enquiry. The result is to divide his life into four periods ; childhood, in which he is all cost and no return ; adolescence, when earnings rather more than balance keep ; manhood, which yields a large surplus over cost ; and old age, in which earnings are not likely to exceed, and will ultimately fall below. even the low rate of expenditure on his reduced needs.

Now the chief influence upon economic welfare is the magnitude of the surplus of individual production over consumption in the period of adult life represented by the hump in the middle of the diagram, and the chief economic justification of an active policy of social legislation is that it may increase this surplus. This surplus has to maintain, not only the worker at work, but his dependants ;

[1] *Livelihood and Poverty*. A. L. Bowley and A. R. Burnett Hurst.

it must maintain them in childhood and age, as he himself was maintained out of another worker's surplus in his childhood and will be maintained in his old age; it must maintain his wife, if her services in the home prevent her from working in industry. Again it must maintain the worker himself, when he is prevented from working by sickness, accident, or unemployment. It must provide maintenance during holidays; and it is the source on which the worker must draw to effect any improvement in his standard of life and enlargement of the material interests of life. Its magnitude depends of course, on the general productivity of industry, which is influenced by invention, the accumulation of capital and the growth of enterprise; but the labourer himself influences it, and the influence he can exert depends mainly on his physique, his educational and technical equipment and the length of his working life.

These three factors are all directly and vitally affected by public expenditure on social services. Physique, more especially under urban conditions of life, depends very greatly upon efficient sanitary regulations and public health provision. The neglect of the human agent in childhood is wasteful, if it were nothing worse, because it will result in lowered vitality and lessened physical effectiveness in working life. Even if adequate food and healthy conditions are forthcoming in childhood, work in adult life is interrupted by sickness much of which must be preventable. English Friendly Societies show an average loss of working days amounting to three or four per cent. of the working year; the cost of this appears not only in loss of wages and output—which has been estimated at £150 millions a year—but in an inevitable loss of economic capacity on return to work. Unemployment, if unrelieved, involves a similar loss of economic capacity; there are no doubt dangers of demoralisation in an income in unemployment which a man has not earned, but it is even more demoralising to be without work and without income as well. Educational and technical equipment depend very largely on public expenditure on education. The State does not provide the specialised training of a workman for the tasks of a particular shop; but this specialised training presupposes and requires a general education to build on. The technical advance of industry is limited by the capacity of the industrial population, which has risen as a result of universal compulsory education. A more speculative, but hardly less important economic result of education, is that it increases the chances of the great scientist, inventor, or organiser emerging and making his unique

contribution to material progress. The number of village Hampdens and mute inglorious Miltons buried in our country churchyards is probably not less than that of frustrated Watts, disappointed Arkwrights, and Stephensons who never had a chance. The cost of raising the school-leaving age to sixteen might be covered for a generation by the surplus of production over consumption of a single mechanical or organising genius, who was saved from the ruin wrought by excessive physical strain during adolescence.

The third factor we distinguished was length of working life. On a base material calculation, death before the age of fourteen involves the economic waste of all the expenditure on the child up to that age. Countries that " economise " on Public Health provision suffer not only the spiritual loss in the waste of child life, but also the economic loss of the surplus of production over consumption that the wasted lives might have returned. The same consideration, it may be noted, applies to the loss of labour by emigration ; every emigrant before the war that left England represented the loss of at least £170 spent on bringing him up to working age and giving him a good elementary education. The length of working life is a less noticed factor. Every year that a man works adds to society's as well as the man's wealth, because it adds another year's surplus of product over consumption to set against the cost of maintaining the dependent population, which consumes without producing. A society, which permits conditions under which a worker becomes " too old at forty," deprives itself of the worker's contribution for another twenty or thirty years, which a more civilised community secures by preventing these conditions. The average expectation of life in England at the age of twenty increased by four years between 1840 and 1913. A large part of this increase may fairly be attributed to the Public Health reforms carried through in that period. In return for its expenditure upon Public Health, therefore, the country gets something approaching four years' extra production out of every worker who reaches working age. It is reasonable to attribute a considerable part of the improvement in economic welfare in the last century to this lengthening of the average adult life.

The productivity of a human being, then, is not a fixed but a variable quantity, and it can be increased by a judicious investment in the human agent. The greatest returns to such expenditure are likely to accrue to public expenditure, because this is directed to the most obvious unsatisfied needs of the population. If we plotted

out in a graph the varying return to varying expenditures on the population,— the variations (in the diagram on p. 97 above) in the magnitude of the space enclosed between our product curve and the base line against variations in the magnitude of the space enclosed between the cost curve and the base line—it would have a form very common in economic enquiry. At first it would show rapidly increasing returns, until the primary needs of physical existence were covered, and then a slower increase ; when the expenditure (*i.e.*, individual income) reached a figure which covered all the requisites of efficient work, it would flatten and begin to show diminishing returns ; finally it might even fall, when the income became so large as to be demoralising and to reduce efficiency. This highly abstract view of the relation of real income to output is, I hope, not merely fanciful. It sums up a significant relation and points to inferences that are important ; first, that the enforcement of a minimum " living wage " is economic, because the returns in productivity to a lower wage are disproportionately lower ; second, that additional expenditure in improving physique and intellectual equipment may pay for itself, even if the increased returns due to it cannot be trapped and set against it ; and, third, that incomes above a certain figure add nothing to the economic effectiveness of the recipients ; they may be needed as incentives, but are not needed to enable the recipient to do his work.

Reverting to our diagram, we can draw certain other inferences that bear on our subject. It brings out the fundamental importance of the family as an economic institution. Industry deals with individuals, but the family is still the unit for purposes of consumption. It is the institution by which the surplus of the worker's production over his consumption is distributed among the dependent members of his class, and by which earning, which goes on during only part of life, is adjusted to needs which go on throughout life. There are usually more than one income coming into each household, and there are roughly two and a half times as many persons in England as there are incomes. The combination of earners and dependants secured by the family is not, however, complete or perfect. The chief wage earner may be dead ; or the surplus of his earnings over his needs may be insufficient to maintain his dependants or to provide for his own old age ; or his earning may be interrupted by sickness, unemployment, or accident, while his needs and those of his dependants run on. In all these cases the State or charity has to step in, and supplement the provision made by

industry. Another inference is that welfare can be increased by making consumption more efficient as well as by increasing production. Consumption is a neglected department of social studies ; but it is clear that anything that enables needs to be met by a smaller expenditure, increases the margin between needs and production, and so increases the possibilities of economic welfare.

A third conclusion is that industrial regulation, without any public expenditure other than that involved in inspection and enforcement, may increase wealth. If industry is subjected to a net-work of regulations that compel it to cover its true costs, by observing proper conditions of hygiene and safety, paying a living wage, and providing for sickness and unemployment, then enterprise will be restricted to those objects the value of which will cover their true costs. At present an industry may expand, because it pays a " sweated wage," leaving it to private charity and public services to supplement this wage and meet all the needs it does not cover ; such expansion is uneconomic, since it draws capital and labour into uses in which the return is less than the true cost. Or an industry may neglect the safeguards, necessitated by its processes, if health and safety are to be preserved, and throw on society the cost of relieving and maintaining the workpeople injured by its neglect ; or an industry may retain an excessive reserve of labour against fluctuations in its activity, throwing on society the cost of maintaining this excess. To stop such neglect, even at the expense of stopping the industry, may be an economical proceeding.

V

In conclusion it will be convenient to examine more closely the scope and limits of this method of industrial regulation. The problem of relating the cost of social services to the capacity of industry will clearly be solved more easily, if the State confines itself to requiring industry to conform to conditions imposed upon it, instead of supplying services itself. In this way, as we have seen, it secures its object without incurring any direct expense (except for inspection and enforcement of the laws), and without ever facing explicitly the problem, what can the country afford ? It is therefore the most convenient method of giving effect to such general agreement about social conditions as exists, avoiding the difficulty of formulating principles and establishing standards by public discussion. It relieves Parliament, which is very unsuited

to the task, of the necessity of discussing what industry can afford, and leaves it to industry to settle that question. At the same time it ensures that, within the limits set by the capacity of the country's industry, provision shall be made for what are thought to be essential needs. It is a method that accords well with the distinctive characteristic of Government; Government is an organ of regulation, adapted to framing and enforcing regulations imposed upon industry; it is ill-fitted to direct industry and to settle questions of remuneration and distribution. It is an attractive method again, because it involves least interference with the normal adjustment of expenditure to returns.

If it were possible to confine all social provision to this type, the State laying down what *form* the provision in each case should take, but leaving it to the ordinary processes of commercial bargaining to determine how industry should adjust itself to the State's requirements and what its *amount* should be, the problem of the economic limits of social legislation would hardly arise. Compulsory insurance might provide for all social needs that were not met by current wages; and the aggregate amount of insurance payments and wages would be limited, as wages are at present, by what industry could pay. But the convenience of the method need not lead us to overlook its difficulties.

In the long run there is no doubt that insurance payments would be allowed for in fixing wages; wage rates are not arbitrary amounts, to be altered by the edict of a legislature, and, if industry has to pay more in insurance charges, it will be able to pay less in wages. But immediately and in the short run, compulsory insurance payments by employers are charges which they cannot shift, and which may seriously handicap their enterprise. They are charges moreover that bear with unequal incidence upon different forms of enterprise; they are negligible in the case of banks, which employ small staffs in relation to their capital and income; they may be crushing in the case of mines, which employ large staffs in relation to their capital and income. Such charges, therefore, should be imposed only with due regard to the state of trade and to the character of the disability they are intended to relieve. Two instances from recent English experience will illustrate the need of this caution. Unemployment may be regarded as a normal incident of modern industry, the relief of which is properly chargeable upon industry by means of insurance; but the excess of unemployment

in British industry since 1920 over pre-war experience is an abnormal experience due to the war ; as such the cost of relieving it should be borne by the country as a whole through general taxes. In fact, through the use of the unemployment insurance and local poor rates as almost the sole forms of relief, it has been imposed upon industry, to the relief of non-industrial incomes, in the form of a tax proportioned, not to the capacity of industry, but to the number of workpeople employed and the amount of fixed capital used. Again, insurance of widows and pensions at 65 were obviously desirable extensions of the national insurance system, which the country could well afford. But to impose the cost of them upon industry in the form of compulsory contributions, when the general unemployment percentage was eleven and the country was just about to engage in the painful process of restoring the gold standard, and to bring the scheme into full operation at once, was to impose upon industry a burden which it could ill bear. The earlier instalments of the national insurance scheme had all been introduced when industry was prosperous and expanding, so that the employer's contributions merely anticipated equivalent concessions in the form of wage advances, which they would otherwise have granted. Social legislation of this type should be related to the trade cycle.

These difficulties in the policy of imposing new conditions upon industry are not the only limit to its application. It is not always administratively practicable, and when it is practicable it is not always economical, to meet a social need by compelling industry to provide for it. It would not have been sufficient merely to require industries to insure their workpeople against unemployment, since the burden of unemployment can only be carried by some collective provision, and industry is not organised for undertaking such collective tasks. It was necessary to establish a Government Insurance Scheme, in which industry was required to insure. The alternative method was adopted in the case of compensation for accidents. The law there merely requires employers to compensate injured employees, leaving them to make such provision as they chose, by insurance or otherwise, to cover their liability. The result is a very imperfect guarantee of compensation for the workman ; his employer for example may go bankrupt, when faced with a total disablement claim ; and a much less economical administration of the funds that are subscribed for compensation. In 1921 of every £100 received by the insurance companies in respect of employers' liability, £36 was allocated to payment of compensation and £64

to other purposes. Since then the companies have undertaken to bring the allocation to actual compensation to 62½ per cent.; but the ratio of expenses and profits, 37½ per cent. of premium income, will still compare unfavourably with the cost of administrating unemployment insurance, less than 10 per cent. of the premium income. The more important social services could never have been left to private provision; to make elementary education compulsory for example, without providing public schools, would have been to make the law ineffective; and sanitary regulations are seldom effective if they are not backed up by the provision of public health services.

While Government then can leave the question of deciding how much social provision shall be made for certain needs to be worked out empirically by industry in relation to industry's capacity, it cannot avoid altogether the direct considerations of economic limits. Government will be forced to provide some services, and will be forced therefore to consider questions of cost and adequacy; in other words to adopt some standards of social need and public obligation.

We may conclude that taxation for social services and the cost imposed upon industry by the regulative activities of Government are not a *net* burden. The expenditure is productive, even in the narrow sense in which the commercial economist uses that word, and even though its productiveness is neither its motive nor its chief justification. It carries a part of the real cost of production, and it is an important source of the general increase of wealth. Some attempt, therefore, to reckon its effects, or at least to allow for them, is necessary to a judgment of it, and some such accounting as I have suggested—in a sort of social budget—is desirable. An exact estimate of the returns attributable to social expenditure is not possible; but we can learn to bear them in mind and to consider them quantitatively, even if we cannot put precise values on them. Quantitative consideration of social problems is possible, even when precise quantitative data are not ascertainable. And more precise estimation is possible than is made at present. The chief obstacles are the incompleteness of official statistics of social conditions and the lack of scientific standards by which to judge them. Both of these obstacles can be reduced. It is not impossible, though it would involve expense, to get fairly complete statistics of wages, of production and employment, of sickness, of the elements

of costs in different industries, or working class expenditure, by the aid of which the relations of commercial prices to the livelihood of the population could be ascertained. Standards to apply to judging these facts are being furnished by the researches of scientists. We have a long way to go before we can state definitely the relations of dietary to work, or lay down optimum standards of length of work, methods, lighting and other conditions ; but we do know enough to be able to pronounce certain existing conditions bad, and to be able to balance the cost of remedying them against the economies in production that should follow. Quantitative social data and standards will accumulate if we want them. They are needed, because the only existing quantitative data, by reference to which economic costs and returns are correlated, are commercial data ; and these, we have seen, understate the true costs of commercial provision and take credit for returns that are properly due to public expenditure.

HENRY CLAY

IS OUR ECONOMIC SYSTEM OBSOLETE?

In a world of ever-increasing wealth we find ourselves to-day in a condition of depression that is quite unprecedented in economic history. The world to-day is richer in goods than it has ever been ; the most cursory examination of statistical data will satisfy the most sceptical on this point. We are, moreover, infinitely richer in services, for there are in the world at the moment, in addition to there being a larger population than ever before, some twenty-five million persons unemployed, and these are ready to work on a lower standard of living than they would have accepted at almost any time since the Great War.

Nevertheless, all the outward indications by which orthodox economists are guided would seem to indicate that the people in the world are much poorer to-day than they were in 1927, 1928, and 1929, in fact, all the available statistics go to prove that we have been getting almost continually worse off ever since 1929.

The first question, then, that we must ask ourselves is : What has gone wrong with the system which served us very well in the past and which has undergone no fundamental change during the industrial era ? It seems to me essential that we should first of all realise the vital importance of never allowing ourselves to be confused by monetary phenomena and that we should visualise the economic system primarily in terms of the fundamental realities of goods and services.

According to orthodox theory and by the lesson of all past experience, since both goods and services are cheaper in terms of money, and since money itself is so plentiful as to be a drug on the market, we should be enjoying a period of almost unprecedented prosperity.

It does not call for the insight of a genius to observe that so far from prosperity being generally available, poverty, taking the world as a whole, is widespread and there is little sign of improvement. It is true that there has recently been some slight measure of recovery in this country and in the United States of America, but it must be observed that the recovery is chiefly taking place in the prices of Stock Exchange securities and of primary commodities.

We are still woefully far from the relatively prosperous conditions and general business activity which the world as a whole experienced in 1927 and 1928. Indeed, the world is at the present moment at one of the lowest ebbs of commercial and industrial activity in recorded history. It is, therefore, not surprising that there has recently been a great change in the attitude of many competent thinkers towards the orthodox theories of economics generally, and of money in particular.

Briefly speaking, the orthodox theory of money is that its value depends upon the limitation of its amount and varies with the quantity in existence. If we accept this theory, it follows that money must be treated as a commodity obedient to the ordinary forces of supply and demand which determine—or are supposed to determine—the values of commodities generally. Fundamentally, the general tendency of equilibrium has depended upon the fact that potential demand has always been greater than the supply. Hitherto, throughout the period of the civilised economic existence of man, it can safely be stated that the potential demand for almost every commodity in general use was far in excess of the available supply. Consequently, all our past theories of economics have been based on the idea that everything has a scarcity value, since there was insufficient of anything to satisfy the potential demand.

This is no longer true. Every scientist and every industrialist knows that the supply of the general range of primary commodities is almost unlimited. We are thus reduced under our present monetary system to a state of affairs in which we are trying to carry on an unlimited exchange of goods with a severely limited medium of exchange. In the past, the amount of currency was limited by the amount of treasure in the form of gold or silver which was in existence. In such circumstances, if notes were issued largely in excess of the available backing of treasure, the position of a nation became very much like that of a private individual who runs into debt. That is to say, credit and general indebtedness were expanded to a point where the claims of creditors could not be satisfied. To-day we are no longer in that position. The Gold Standard no longer operates in most countries. Currency merely serves the function of calculable units for the relative measurements of goods and services exchanged. The great mass of the public is content to use as currency, notes which owe their value solely to the fact that the Parliaments concerned have decreed they shall be legal tender. Even so, these notes would not be accepted but for the fact

that the public have confidence that they will always be able to exchange them at will for goods and services.

The amount of confidence reposed by the public in the authority of the State in monetary affairs is astonishing. They are prepared to use notes of almost any size, shape, or colour, and they do not, as a whole, raise any serious objections even when the value of the notes changes as a result, for example, of the country going on or off the Gold Standard.

The public mind may become disturbed at the idea of the loss of national prestige, but in England at any rate we have hitherto had no particular outcry on account of the pound note being worth considerably less to-day than it was a few months ago.

The fact of the matter is that although the general public possibly do not realise it, they are quite happy about any currency so long as they can obtain sufficient to carry on their ordinary daily transactions.

The tendency at the moment is for less and less legal tender currency to be required for the monetary transactions of Great Britain, which are very largely carried on by means of cheques drawn against balances which only exist in the ledgers of the banks where the transactions are recorded. The great bulk of the monetary units in which the wealth of the nation is measured have for long past not existed in the form of currency at all. In fact, the amount of currency in circulation is, speaking generally, only what is necessary for the small change transactions of the nation. Most other transactions require quantities of monetary units which would be most inconvenient to handle in currency and consequently they are carried out by means of cheques, bills of exchange, and so on.

In Russia to-day this tendency to economise the use of currency has reached a point where the ordinary working man is being persuaded to take his wages by cheque, and if that practice extends, as it easily may, to England, it will have a pronounced effect upon the volume of currency necessary to carry any given mass of trading and manufacturing activity.

This brings us back to the absurdity of treating money merely as a limited commodity; strictly controlled by a private corporation, operating in a series of highly sensitive markets: in a world where all other commodities are unlimited and for the greater part, uncontrolled.

We cannot in fact continue to run the world on a monetary

system the basis of which is one of the very few limited commodities in the world—gold—while at the same time the production of most other commodities is potentially unlimited. If treasure in the form of both gold and silver was relatively sufficient we might be able to continue successfully with the present monetary system.

Treasure, however, is strictly limited, and since, so far as internal transactions are concerned, it is only necessary to use currency for purposes of immediate convenience (the bulk of transactions being quite satisfactorily handled by the transference of balances in bank ledgers) it is only when you come to deal with foreign trade balances that the discrepancy between the value of goods exchanged must be met by the transference of treasure.

It seems to me to follow that what we have to visualise for the future is an internal monetary system based not upon gold at all but upon the volume of general transactions which business men and the public desire to carry out. We should restrict the use of treasure entirely to the international field of trade for the purpose of meeting adverse balances, as long as we continue the fiction of adverse and favourable trade balances.

It will be held by the opponents of what is popularly called inflation that this proposal would result in an increase of domestic currency and a rise in prices, and that the only sound policy is to reduce prices by decreasing the quantity of currency relative to the quantity of goods. This deflationist theory, however, will not hold water in the modern world, where the total of monetary units is liable to considerable fluctuation as a result of the legitimate expansion or contraction of credit as trade varies, but where at the same time the total of monetary units is spasmodically checked by operations based on the volume of currency.

As I have said before, the supply of wealth throughout the world is practically unlimited and most authorities now agree that the average annual increase in the world's wealth in the terms of the power of mankind over nature averages about three per cent. Consequently, what we really need is a monetary system which will permit the expansion of the monetary units available year by year so as to permit us to use for the benefit of mankind this annual increase of wealth in a regular and orderly manner. It is further the case that with the increasing advance of science over the whole field of man's attack on the secret powers of nature, that this rate of three per cent. will increase to four or even five per cent.

The tremendous progress which has been made in the manufacture of synthetic products and the fact that we are on the eve of great discoveries in the production of power makes it all the more essential that these potentialities of wealth for the peoples of the world should not be held back because of the inadequacies of an obsolete monetary system. I know no better example of the farcical situation of to-day than the fact that the amount of nitrogen fixed daily from the air by the synthetic nitrogen works of Imperial Chemical Industries at Billingham is far less than the amount daily breathed out by the adjoining city of Middlesbrough. This fixed nitrogen is in a form which is capable of vastly increasing the supply of animal and vegetable nutrition. Yet the recent report of the local Medical Officer of Health states that he is now definitely able to observe the effects of malnutrition upon the children of the district owing to poverty due to unemployment. It is quite inconceivable that such a ghastly travesty of human relationships should long continue.

In the words of the orthodox economists, demand is need plus ability to pay—in other words, need plus money.

The present shortage of money throughout the world merely produces an unnecessary limitation of apparent demand, and although ultimately there must be a saturation point for all commodities, we are not only a long way from such a point at the present time, but show no signs of progressing towards it at anything like a satisfactory rate.

It is not possible to visualise the world wherein every human being owns a hundred motor-cars or where every person living has five hundred suits of clothes. The quantity of food that a human being can consume, and still survive, is definitely limited, so that even in primary commodities a saturation point is conceivable, unless one visualises the possibility of the transference of population to an illimitable planetary sphere.

The remoteness of a saturation point in commodities of any kind, is, however, so great that it is profitless to consider within any reasonable space of time the supply of any particular commodity being in excess of potential demand. What we must do, therefore, is to abandon our obsession with the so-called forces of supply and demand and look upon money and prices merely as means of enabling demand to keep pace effectively with a steadily increasing supply of wealth. It is of no use, to a world in which poverty is rife at the same time as the store of unused wealth is enormous, standing up in lecture halls and explaining to generation after

generation of students that this is all due to a failure of demand or an excess of supply.

Marketing must no longer be left to the operation of purely speculative forces. The whole stability of markets can be upset to-day by transactions trivial in proportion to the quantity available. A small percentage excess of supply over demand in any particular commodity may in present circumstances force down the prices of the whole available quantity by as much as 20 per cent., or more. This ridiculous phenomenon is due partly to the vagaries of our monetary system, but largely due to the inadequacy of our methods of marketing. What we have to do is to eliminate uncertainty of supply by maintaining an adequate (probably twelve months) reserve stock of all commodities by the means suggested in my book *Why the Crisis ?*[1] by means of what I called the " Cistern " theory of stocks.

Booms and slumps are entirely fortuitous occurrences probably primarily due to the irregularity of the incidence of this tendency to continual increase of wealth. If consumption in any year greatly exceeds the normal three per cent. increase, a general increase in industrial activity is stimulated, which leads to an excessive production of capital goods, the resultant products of which temporarily fail to be absorbed, and this surplus is eventually thrown on to the market, dislocating the whole course of prices, producing the appearance of slump, and we are then compelled to wait until stocks are depleted, and prices can begin to rise again, before we can continue our beneficial progress. In the meantime, we have had a first-class depression and widespread poverty side by side with stocks of commodities which really amounts to an anticipation of future improvements.

Such advance stocks should really cause no serious dislocation of our affairs and should in fact represent the possibilities of a period of increased leisure and of the overhauling of our economic machinery, which would be beneficial rather than detrimental to mankind in the long run.

The variation from slump to boom—from the destruction to the creation of credit and vice versa—is largely the outcome of a change from a short view to a long one, or the other way round. When the world takes a short view, nothing is worthy of credit : money will not be lent upon any commodity or against any security.

Everyone tries to draw in monetary units without regard to the

[1] *Why the Crisis ?* Victor Gollancz, September, 1931.

possibility of the movements of goods. When the slump has become so appalling as to be intolerable, the world slowly awakes to the absurdity of the position ; like a man who has been walking in his sleep and finds himself in the street in his nightshirt. People suddenly discover that the world is going to continue after all ; that goods must move ; that the called-in monetary units are piling up and incapable of earning interest and that everything looks absurdly cheap. They begin to buy ; stocks move off ; prices rise, factory wheels re-start ; clerks and workmen are re-engaged ; and the world swings back to prosperity. The long view is towards ever-increasing prosperity, and what we need is a financial machine and an economic policy that take a permanently long view.

The adequate control of such a system demands, I feel, something much more effective and more intelligent than our present political system. It is my view that there should be set up an economic sub-Parliament or Supreme Economic Council representative on the broadest possible basis of all the economic and industrial interests of the country, and also of the political opinions of the people. To such a body should be delegated the entire responsibility for the regulation and supervision of the economic life of the nation. It should be for them to plan soundly and upon the basis of experience and intelligence the progress of the people along the path of ever-increasing prosperity and well-being.

Their principal immediate task should be to construct an entirely new financial system which, in my view, embodies the principles outlined above.

I have no room here to discuss the details of such a plan, which I have dealt with very fully in *Modern Money*.[1]

Suffice it to say that in both Italy and Russia great experiments have been put in hand for the proper organisation of the economic life of these two great nations. In neither case have they been entirely successful, although Italy, starting from chaos, has achieved a very remarkable degree of order. Russia has made a relatively greater experiment and while producing much that is novel and interesting has not yet really achieved success.

What I do feel is that if the British nation sets its mind to a vast scheme of national and imperial economic planning, it has the knowledge and the ability to achieve success, and to restore orderly prosperity out of the industrial and financial chaos into which we have been led by adherence to an orthodoxy which was based on an entirely different set of facts. MELCHETT

[1] *Modern Money*. Martin Secker, October, 1932.

THE RELATION OF BANKING TECHNIQUE TO ECONOMIC EQUILIBRIA

A preoccupation with monetary theory during this period of depression requires some explanation even if it does not demand justification. An avowed belief in the importance of monetary management and banking technique does not entail, in my opinion, the disclosure of any explanation, monetary or otherwise, of the fundamental causes of depression. It would appear only necessary to accept as conclusive, evidence of present monetary disharmony: and on three scores our own monetary system has failed to operate harmoniously; it has provided a standard of values subject to considerable, and in prospect if not in retrospect, unforeseeable fluctuations; it has been unable to preserve satisfactory exchange relationship; and it has failed to convert hoarding into goods designed to facilitate and enlarge future production.[1] This disharmony may be wholly or partially self-generating—a necessary corollary of the structure of our monetary system; or, on the other hand, disharmony may be wholly or partly induced by forces entirely unconnected with the monetary system, *i.e.*, by partial overproduction, by tariffs or by reparation payments. The initial cause, however important it may be to economic welfare, is of no concern here. Monetary disturbance exists and may possibly be eradicated and a sense of the importance of this factor should in no way suggest even a belief in the predominant importance of the money machine, still less an acceptance of the purest form of monetary explanation of depression. So long as forces operate through the monetary system the conformation of the system to the demands made upon it is of importance.

The structure of the monetary system is partly formed by custom—in other countries by law—within which the detail is

[1]One's conception of monetary disharmonies—it is probably impossible to be explicit enough to obtain a satisfactory definition—is related to one's conception of the functions of the monetary system. The more important functions are, first, to preserve satisfactory relationships with other monetary systems in the foreign exchange market; secondly, to maintain a satisfactory standard of values; thirdly, to facilitate exchange; and fourthly, in the words of Mr. Robertson, "to place effectively at the disposal of trade and industry that part of the savings of the people which is committed to its care." Minutes of Evidence taken before the Committee on Finance and Industry, Vol. II., Statement of Evidence submitted by Mr. D. H. Robertson, paragraph 2.

filled by less formal and more elastic procedure. As a consequence, banking, the important part of the system with which this note is concerned, displays a certain amount of rigidity which may hamper it in adapting itself to achieve those ends which have come to be looked upon as the social *raison d'être* of its existence. It is this possibility which it is desired to examine here.[1]

The relation of the four functions of the banking and monetary system to its structure can first be simplified for the purpose of this note. At the outset it can be laid down that the provision of a satisfactory mechanism of exchange will in general be forthcoming save in the most extreme circumstances. Either, or both, of two conditions is appropriate to these circumstances. In the first place, a general mistrust of the currency may make it impossible for a money economy to survive and lead directly to barter ; or, in the second place, a general distrust of bank credit money may necessitate a reversion to cash transactions which will seriously limit activity carried on within the money economy—apart from the collapse which such distrust will entail and the concomitant circumstances which experience leads us to expect. Provided, however, that a money economy and a banking system exist, this function generally will be adequately performed. Moreover, two of the other functions are closely related. The reason why it is desirable that a satisfactory standard of values should be provided is not the same reason why a banking system should place at the disposal of industry and trade the savings made through it. A satisfactory standard of values, *i.e.*, the maintenance of the purchasing power of a monetary unit at a fairly stable level in terms of either commodities or services or effort or some combination of these, is desirable on the grounds of common fairness, and of expediency—for the maintenance of credit transactions and the production of utilities. As to the second function, if a community wishes to make savings out of its income, it is desirable that the social benefits of reduced real costs of production and augmented economic welfare should be realised. An efficient performance of the second function is needful for another

[1]It may be doubted whether it is strictly the task of the economist to set up normative functions for particular parts of the economic organisation ; rather is it his task to analyse these component parts as he finds them. It is even more to be doubted, however, whether he should refrain from analysis that strays over the border line of the subject if it is likely to be of value directly or indirectly. In any case, in this instance it is static analysis which leads us to the norms in question, and the enquiry resolves itself into considering why under dynamic conditions the results one would expect in the long period are not in fact realised.

reason, namely, that an inefficient performance of this function entails an inefficient performance of the former function. If savings are not passed on by the banking system to reach industry, they are wasted on savers and non-savers alike in falling prices. If the banking system places funds at the disposal of industry and commerce which it has not had handed to it by consumers—itself at present undesirable if only because it runs counter to the one clear criterion we have of what is economically desirable—then the result is a reduction in the purchasing power of the unit in terms of commodities and services. Thus these two functions are very intimately related and can be dealt with together, leaving us only two functions to investigate in the light of the present banking structure.

In this country, deposit banking is given its character by the customary proportions that certain assets bear to deposit liabilities. The funds of the banks represented by their liabilities to customers on deposit and current accounts, are invested along various lines in certain broad proportions. Thus, roughly fifty per cent. of this money is loaned to customers as advances or on overdrawn accounts ; around seven per cent. is kept as money at call or short notice—advances to discount houses holding portfolio of bills or to the stock exchange carrying securities ; approximately fifteen per cent. is kept in the form of investments—chiefly government securities, while some ten to twenty per cent. is used for holding bills discounted either on the initiative of the banks or their customers. In general, it may be said that a bank can finance its customer either by a direct loan or by the discounting of the bills he draws, so that over a period of time there is a tendency for this last item to fall as the bank's advances rise and for it to rise as bank advances fall.[1] Latterly, the former tendency has been in evidence.

[1]During the last five years the proportion of different assets to deposit liabilities have fluctuated in the following way :

Average weekly proportions of assets to deposit liabilities—

	Dec., 1928 %	April, 1929 %	Sept., 1930 %	Feb., 1931 %	August, 1932 %
Money at call and short notice	9·3	8·3	7·7	6·4	6·4
Investments	14·5	14·5	15·0	16·5	14·2
Bills discounted	14·2	10·9	15·9	16·5	20·2
Advances and other Accounts	52·1	56·3	52·4	50·9	44·2

It will be noticed that as the proportion of " money at call and short notice " decreases that of " bills discounted " tends to increase, suggesting that the banks maintain liquidity by increasing early maturing assets through

Finally, some ten per cent. of resources is kept in the form of cash and balances at the Bank of England. These customary proportions have not, of course, any intended relation, actual or historical, to the functions of banking as the economist has come to understand them. Any relationship must be accidental for they have evolved to help the attainment of the ends of banking as the banker understood, and in most cases still understands them. These are, first, the maintenance of solvency ; secondly (the function of which the first end is a condition) the earning of profits ; and, thirdly (a necessary function for profitable banking) the provision of facilities to customers.

For our purpose the danger to the solvency of the banker comes about in two ways. He may be placed in a serious position if he has to realise assets in order to satisfy the demands of depositors desiring to place their balances with other banks. Such a movement would immediately place a strain on his balance with other banks, generally the central bank, upon which he would have to draw to effect the transference. If confronted with such a situation it is essential that he should possess assets easily realisable to replace his depleted liquid assets. Hence behind his cash and balances with other banks, the banker holds money at call or short notice which when called up will generally be repaid to him by credits on other bankers, replenishing his depleted balances. Even though such a disposal of resources is not calculated to ensure the making of large profits it ensures a degree of liquidity to protect the solvency of the banks. At a further remove from liquidity stand securities, long dated and irredeemable bonds which can be sold at a price in the open market against deposits with other banks. Good securities of this kind are in a modern financial organisation highly liquid. Nevertheless they are relatively less desirable than short money as a bulwark against insolvency because their value is likely to fluctuate

purchases in the market as the demand for short accommodation falls off. In this respect, the banks' classification is defective, for bills are held partly as short investments and partly as security for advances to traders. Hence, one would expect discounts to fall as advances increase and this in fact seems to happen. In reality, therefore, there is considerably more stability in the proportionate use of funds than the figures themselves suggest, and this is borne out by the fairly constant proportion of " investments."

It must be remembered, too, that variations in proportion will tend to occur because of seasonal variations for different kinds of accommodation and because of variations in the demands of the Treasury. It is to suggest the greatest variations that different months are taken in each year.

Again, over the period analysed there is evidence of the greater difficulty in using funds, resulting in the fall of advances, and in the increasing purchase of bills for investments, as depression deepens.

and may depreciate considerably if sold on a large scale; though, except in very unusual circumstances, they are more desirable as revenue earning assets. Though the banking system customarily does not avail itself of its ability to sell its bill holdings, yet the early maturity of these assets results in a decrease in deposit liabilities as discounting facilities or purchases are diminished.[1] In the case of advances, assets are to a large extent frozen for the time being—dependent at any event on the duration for which the loan was made and a function also of the ability of the client to make himself sufficiently liquid at the end of that time to repay his advance. The aim of the banker, therefore, is to make a compromise between the different ends he has in view. To remain liquid, yet to make profits; to satisfy the demands of his customers for credit yet not to become over-lent.

Again, the banker may be confronted by a demand for cash rather than a transference of deposits. For this purpose he needs assets quickly convertible into cash—cash in hand to meet the customary lag between payments of cash out of the till and payments into it, balances with other banks to replenish till money if that item is depleted, short money and investments to renew credits on other banks. Thus in the case of one bank faced with either danger the gradation of assets places a series of defences against the menace of default without the necessity of keeping too large a proportion of sterile assets.

It is to be doubted whether this arrangement of assets has the same force to-day as it had formerly. When closely linked up with some particular locality or industry, a particular bank might be placed in a delicate position if it were suspected that a large proportion of assets had foundered or frozen solid with the decline of the industry and of the locality. This is especially true if it is suspected that there is little cover behind loans, and if the technique of a credit economy has not been assimilated by a proportion of depositors. Only a fairly high proportion of liquid assets can enable a bank to withstand and eventually counteract a pressure calculated, if it continues, to disclose an actual insolvency that time and confidence would ultimately remove. But when it is known that assets are widely distributed among the different firms of many different industries and localities, that advances and loans are for the most part well covered, when the belief in the solvency

[1] By increasing its acceptance liability a bank could dispose of them with a minimum loss.

of the banking system is ingrained and the only suspicion cast upon payment by drawing upon a deposit is the ownership of the deposit and not at all the ability of the bank to transfer that deposit, there appears little likelihood of any nervous transference of deposits or withdrawals of currency. The true defence to-day against a " run " on a bank is first a belief in the necessity of a credit system and the inconvenience of currency transactions, and secondly the confidence in banking technique, reinforced by the belief that the assets of the banking system as a whole lie behind each bank in the interests of every bank not less than in the interests of depositors. A demand for cash is unlikely in this country to fall on one bank alone should suspicion ever make such headway, and a transference of deposits is more likely to be stayed by a gesture from the banking system as a whole than from the knowledge that some forty per cent. of the assets of each bank is available almost at call to meet the demands of nervous creditors. In this country, if in no other, it would appear that liquidity has lost its old, and probably important, significance. We have a strong and extremely solid banking system which should not limit its useful functions to society and its proprietors because of historical reasons and of a prejudice in favour of the old and safe as against the new and untried however insignificant are its attendant risks and important its attendant advantages. Banking has changed fundamentally in character—from being a local industry it has tended to become a national industry—though certain banks still retain local or partially local characteristics. To these the present argument may not apply or will apply with less force ; whereas previously, and as for example in the banking failures in the U.S., local disturbances and local panic consequent upon extreme local depression and generally accompanied by local mismanagement, have been responsible for turning the aggregate of a bank's deposits from an extremely contingent to immediate and pressing liability, now it would appear that only national disturbances will have this effect. In such an event it will be almost certainly of such magnitude as to make it hardly worth while to disturb oneself about the liquidity of the banking system. One would conclude that our national banking system is an integral part of our economic system and is likely only to be endangered by a collapse of that system. If this argument is not correct then Mr. Robertson's conclusions in paragraph 9 of his evidence appears worth more serious thought than he cares to claim for them at the present time.

This is not to say that the investment of assets along different lines has no present significance. Ultimately a bank must hold currency for the same reason that the wage-earner does, because the inflow and outflow are not regulated to keep pace with each other, and because ultimately neither is under the control of the recipient and disburser. The amount which must be held to satisfy the demands for cash depends upon the magnitude of the cash turnover—a function of active deposits—and upon the possible divergence between the outward and inward flows of currency in the system together with the difficulty and expense of transferring an excess of currency reserves from one locality to another in which there may be a deficit. To an extent each locality must be regarded from this point of view as being discrete—having its separate turnover and rates of inflow and outflow.

The central bank balances, classified together by the banks with till money and currency held in reserve, are held for rather a different purpose. In the first place, from the point of view of a particular bank there is a continual net gain or loss of deposits to other members of the banking system, necessitating a credit or a debit to the assets of that bank, and these payments are most conveniently made through the balances held at the central bank. Again, the central bank balances can be used as a reserve of currency to be fallen upon when it becomes necessary to satisfy the demands of depositors for a greater than customary holding of currency. Thus, it is well known that during holiday periods the deposit bankers have to let out a greater quantity of currency.

Short money, too, performs a banking function other than being a revenue earning investment. The central bank balances of deposit banks may be reduced by the action of the central bank, thus making necessary either an adjustment of deposits to the new cash basis, a replenishment of cash, or both. By means of calling in short money, the banks can force the market to borrow from the central bank and increase the amount of central bank money preparatory to adjusting its position to meet the new position to which the central banks desire the system to conform. Thus by altering the amount of money in the short market the banking system smooths out the abruptness with which a central bank must necessarily work. It is, of course, untrue to say baldly that in its loans to the short money market the banks possess an instrument by which their cash basis can be replenished. The central bank will replenish it at its own price and by alterations in this price it alone has in its hands

the means by which ultimately the cash basis of the system is determined.

The banking system may throw for the time being the whole re-adjustment on to their short money assets, depleting or expanding these considerably. But too small a proportion of money at call or short notice may be deemed inadvisable because it may make difficult an adjustment to a further contraction in central bank money, and tend to upset the banks' more permanent investments ; while too large a proportion, though avoiding this particular difficulty, will result in a loss of revenue, especially if the central bank expands credit. Investment holdings can be used to re-adjust the proportion of liquid assets to the action of the central bank ; money taken out of the market can be re-lent, as funds are obtained from the sale of securities or as the holding of bills is decreased ; and the adjustment can be effected with an opposite end in view. Besides this function, investments stand to advances in much the same position that short money stand to investments. A relaxation of conditions by the central bank will for a time affect advances very slightly and money will tend to flow into investments until the banks feel it possible to increase advances for some period of time. Advances cannot be contracted or expanded hurriedly, and, therefore, unless there is felt to be a probability that advances can be safely expanded for a period they will not be expanded at all. One would suspect that it is not the difficulty of obtaining openings for advances that prevents an immediate expansion and which gives a peculiar importance to investments but the difficulty of contracting them. Precipitate action in expanding loans cannot be countered if the situation changes quickly by precipitate action in an opposite direction. If credit is expanded, therefore, it finds its way into investments until the banking system considers that easy conditions are to last long enough to warrant with safety an increase in the advances to industry. If credit is contracted the investments asset will bear some of the contraction that in due course the banks will ask their advances to shoulder when they find it possible to call in loans without too great a danger to the solvency of their clients.

Into the structure of these assets must be fitted the banks' holdings of bills. In mass these assets maturing at fixed dates are of the nature of investments or advances and are not usually realised until maturity ; but as the dates of their maturities are scattered in time, bill holdings are immediately susceptible of a fair degree of contraction or expansion if the occasion warrants. A certain

proportion of the contraction in assets following the necessary contraction of deposits brought about by central banking action can, therefore, be spread fairly quickly to bill holdings. But the sensitiveness of this factor should not be over-estimated. Though old bills mature it may prove extremely inconvenient to a trader if he cannot finance his regular business by discounting new bills, and therefore the banks should find their holdings of bills obtained in this manner fairly constant in the short period. Contraction or expansion will be occasioned by a decrease or increase in the purchases of bills made on their own initiative, and this may take the place of an expansion in investments proper.

The remainder of the assets—permanent investments and bank premises—the banks can afford to keep relatively stable, relying upon the fluctuations in the other assets to conform to a new situation.

Here, then are explanations and justification of the broad structure of deposit banking in this country ; there is also criticism because of the effects of this structure on account of its rigidity.[1] The first criticism arises on account of the effects of rigidity upon the external values of the monetary unit, *i.e.*, its value in terms of other monetary units. The market value of a monetary unit may tend to alter in terms of other units through the action of two distinct forces. It will tend to depreciate, or appreciate, if the level of costs in the particular country is such that the exports from that country are more, or less, than sufficient to pay for the import of services, commodities and securities that consumers and investors desire to purchase. If the country in question is on a gold standard then the appropriate action for the central bank is to manage the financial system so that with the least disturbance the level of costs may be raised or lowered.

A central bank desiring to raise the price level can only lower bank rate and proceed to make that rate effective, either, actively, by purchasing securities or, passively, by the discounting of paper of those who find themselves unable to get accommodation elsewhere at so low a rate : the final result being a greater cash basis on which the deposit banks can work, and a lower rate of interest, especially upon relatively short term loans. The deposit banks find themselves in a position to increase their deposits by the

[1] This rigidity is only relative, but flexibility in an unwanted direction may be less and not more socially appropriate than rigidity.

purchase of different kinds of assets without a lowering of the proportion between cash and deposits. Under certain conditions, the purchase of any kind of assets will be sufficient to give a buoyancy to the price level, chiefly because the lowering of bank rate and the increase in credit is taken as a bull point. In such a case, the effect of bank rate changes is chiefly psychological, in the sense that the result follows the change because of the interpolation of psychological forces, and not in the sense that the result of bank rate change must be psychological, for given time an effect of the same order will probably follow without such an interpolation. But under conditions of less balance, for instance when the market is willing to recognise bear points and unable to detect favourable reports, the action that the deposit banks pursue may be important. In the first place, the banks will be inclined to increase earning assets by expanding their loans to the money market preparatory to a more even dispensation. Money rates will tend to be forced down even from the rather low levels which may have ruled, and this tendency will be reinforced as the system increases its purchases of bills. A certain amount of funds will tend to move from the market to the purchase of short dated securities, thus lowering the rate of interest on loans for rather longer periods. When the bankers begin to move funds out of the market for the purchase of longer dated investments as the yield on bills falls the movement towards easier conditions will be spread over a wider area. There are, I think, certain criticisms which may be levelled at this *modus operandi*. The effect upon the price level of a reduction in the short money rates may be extremely small[1]: certainly the elasticity of demand is likely to be small so that even a considerable reduction in the price will not cause a great increase in investment in circulating capital financed by this method. It may be suggested, too, that a considerable proportion of the additional funds will be used on transactions previously financed abroad, so that the net effect on the domestic price level would appear likely to be relatively small. Again, too great an increase in the funds placed at the disposal of the market or invested in the purchase of bills may cause rates

[1]In normal times it will be considerable because an intelligent market anticipates the normal reaction. Mr. Hawtrey holds the opinion that the effect of a change in the Bank of England official rate may in certain conditions be sufficient to cause a rise in the price level not only here but in other countries. This may very well be true, though it may not be true because of its direct effect in lowering the cost of merchanting; it may again be due to its anticipated effects.

to fall below that which the central bank considers desirable for the protection of the external value of the monetary unit. Even a relatively small increase in the money so invested may therefore cause a re-tightening of the credit conditions. It is unlikely that in all circumstances a given proportion of the increased assets can be invested in short money without causing rates to fall too low to maintain the exchange: so that though prices may be too low inflation may be difficult unless the position of the central bank is very strong. If an orthodox operation of the international gold standard demands a rise in prices, or if the central bank is pursuing a cheap money policy for a rise to take place and factors of production to be taken into employment, then the greatest rise in prices consistent with the retainment of the international position is desired. This is normally what is always wanted in times of depression, and what is desirable, *ceteris paribus*, to obtain the maximum gain from international trade; in depression it is also difficult to achieve. It can be effected, first, by stimulating enterprise and demand and confidence as much as possible, and secondly by lowering as little as possible the rate of interest on capital most sensitive to international forces. As we have said a large expansion of funds in the short term market is not likely to bring about the desired results on either of these scores; it is therefore desirable that credit should be created to influence enterprise to the maximum extent, and which, while allowing prices to rise, will not, directly at any rate, tend to stimulate too large a sale of bills on, or too large a flow of funds from, the market. Generally, therefore, one would conclude that when the central bank is pursuing an easy credit policy, and especially in times of depression, the proportion of assets kept at short notice should be allowed to fall.[1] Although the negative proposition of what is *undesirable* can be established, it remains difficult to ascertain how a desired rise in the price level can be obtained smoothly and consistently with an international standard. To place the position in its simplest terms, an increase in the price level can only be obtained by an increase in spending, and an increase in spending can be obtained directly—perhaps the most sensible and obvious way, though it is a good deal more difficult

[1]It may be suggested it is desirable that during such a period the deposit banks should allow the proportion of cash to deposits to fall in order to let out a greater amount of credit on a given cash basis. Provided, however, the market will maintain bank rate the central bank will be able to create as great a cash basis as is necessary. The arguments in favour of alterations in this proportion are of rather different nature and will be dealt with below.

than it appears on the surface—by increasing the incomes of people who spend ; or it can be done by the attractive method of giving money to spend to those who are in want, or the roundabout and mysterious way of pursuading people who have money to spend it or invest it, and by inducing those who have not money to borrow it and spend it through persuading them to see openings for profitable expenditure and investment. In depression, the economic system itself tries to persuade people to spend by increasing competition and so making goods cheaper and more attractive. What we are concerned with here is how the banking system can induce people to invest money and persuade people to borrow money. A discussion of these points relates to a section of economic theory which is as yet little understood—the theory of interest and the supply of capital. In the long period it may be true that, other things being equal, a greater supply of capital will be forthcoming at higher interest rates ; in the shorter period it is by no means so certain. To induce people with a surplus of income over what they consider a necessary expenditure, it is more necessary to stimulate their confidence in investments than it is to offer them a higher rate of interest ; in any case, even though a higher rate of interest would attract a greater volume of funds in the investment market this would be otiose if borrowers were unable or unwilling to afford such a charge upon the future earnings of the enterprises the funds are used to start.

The view has been put forward that in times of depression the investor is actually deterred by a high interest rate, because of its suggesting to his mind, and tacitly admitting, the presence of a considerable risk. I can conceive that this may be true of ventures which are admittedly speculative in essence—for example, the bonds of insolvent states—but it is hardly likely to be true where the risk presented is an instinctive fear of the safety of everything, and the possibility of losing by not waiting to see how things turn out. Though the supply schedule of new capital is not shaped in this fantastic manner, I think it may remain true that the elasticity of supply is of a low order, and a low rate in a settled investment market is likely to bring forth a much greater supply than a high rate if in the latter case it is suggested to the investor that the bond market is insecurely established. It is obviously true that at a given price level a low rate of interest will be more attractive to borrowers than a high one. By lowering the rate of interest and strengthening the market in loans designed to facilitate the exploitation of new ideas

and new or growing markets two effects both designed to secure an advance in the price level would be obtained—namely, freer lending and more widespread borrowing.[1]

A greater effect on the long term rate of interest will be obtained by the action of the banking system if it purchases its additional assets from this market than if the effect on the bond market is indirect through an increase of short loans. A purchase which is small in comparison with the bonds outstanding is likely to provide relatively large results because a very large proportion of bonds are securely held, so that the turnover is small, especially in depression, in comparison with the total issue. A small purchase may be large relatively to turnover which is quite small relatively to the issue. By a purchase of weakly held stock the firmness of the market will be increased, and unless the resultant rise in bond prices is too rapid, the market should tend to consolidate itself at the new position.

If the banks were willing to follow the signpost of profits this is the action that they would take ; there are, therefore, grounds for believing, unless special consideration to the contrary can be urged, that this is the " correct " reaction.

If this line of argument is carried forward logically it would result in an expression of an opinion that the banks, to fulfil their function of altering the price level, should be prepared to make more *advances* to industry. An increase of credits of this kind, borrowed for the purpose of carrying stocks and raw material and goods in process, would obviously increase purchasing power more directly than a purchase of investments while superficially it would be more profitable. It must be doubted whether the banks will find it easy to expand advances at all times : it will be most difficult to carry through such a policy in order to raise prices when there is most need for it. When prices are persistently falling and the most

[1] The elasticity of demand for long term loans is likely to be considerable. First, because the incentive to borrow is a factor of the differential between the expected return on the " instruments " purchased with borrowed funds and the cost of borrowing. Thus if the expected net annual return after allowing depreciation and obsolescence amortisation were at the rate of 6½ per cent. on money borrowed, and the rate charged on new long term loans for such enterprise fell from 6 per cent. to 5½ per cent., the incentive to borrow would be roughly doubled. Second the cost of borrowing is a relatively high proportion of the value at which the services of durable commodities can be sold, so that if a small proportion of the reduced cost of borrowing can be passed on to the consumer it is likely to extend demand considerably, provided that the elasticity of demand for that service is of a fairly high order. There is the further consideration that the demand for loans will tend to be lifted bodily with every increase in confidence, and a general lowering of rates is likely to increase this confidence.

obvious instrument of inflation is a direct injection of money into the stream of income and expenditure, that injection may be difficult to compass. Conclusive evidence on this point is not easily obtained. There is no doubt that advances of a kind could be made, but it is likely that advances which the banks favour on the criterion of safety and liquidity will be in diminishing demand. Before falling long term interest rates cause an increased demand for short credits, it is reasonable to conclude that to increase this form of asset, the banks would be forced to ask for less security and less liquidity, to assume some of the risks more normally accepted by shareholders, and use judgment in endorsing propositions on which investors at the time will not venture to risk their money. In more normal times, however, an increase in advances will not be difficult to compass.[1]

By making these two modifications in their practice a good deal could probably be done ; much more than a reduction in the charge for loans would bring about. Such an alteration in banking practice, however, would lead the banks in times of depression to accept functions for which they are not adapted and of which they have little and only reluctant experience. The objection is not at all that such a policy would endanger liquidity : as a whole the assets of the banking system are very much more liquid than are the liabilities. A long term loan whatever form it may take, necessarily thrusts upon the banks a responsibility for moulding the shape of the economic system, and this is almost, if not quite, a new function. At present, the main credit function of the banks is to provide an already designed and existing economic system with credit to obtain sufficient material and labour to function with as little disharmony as may be. This function of the banking system may, of course, influence the design of the economic structure : if credit is withdrawn an economic organism will wither and if credit is given freely an organism will tend to expand ; but this influence, though always present, is not of over-riding importance. In general, if a bank finds it unsafe to grant sufficient credit to an entrepreneur for the processing of his plant the decision about the place of that entrepreneur in the system has been decided by the community or by his workpeople or by his creditors. Because the banking

[1]The evidence given on this point to the Macmillan Committee is curiously contradictory. Taking account of business opinions one would conclude that the difficulty is to keep advances within the limits the system imposes on itself, but analysis gives no ground for concluding that at the rates charged five times the amount of central banking money will either be greater or less than the advances demanded.

system may have the last decision, it must not be regarded as having the determining decision. In accepting greater risks the banks accept greater responsibilities, and it may well be unwise to ask them to shoulder these responsibilities as one of their normal banking functions. This is not, of course, an argument against the banking system advancing secured loans or loans involving a fair element of risk to agencies suitable for making long term loans to industry.

It may be easy to assert that along this line lies danger, yet difficult to point out exactly where the danger appears. If the criterion which this analysis suggests should be adopted is the greatest possible volume of remunerative lending subject to the assumption of not too great a planning responsibility, and if the criterion to which the banking system pays greatest respect is liquidity, it is unlikely that the volume of advances on a given cash basis is the ideal volume for the internal position. Thus, there appears to be no reason why the banking system should not be prepared to advance a conservative proportion of the cost of a house although it may be admitted that undesirable responsibilities would have to be accepted if a large proportion of advances were on long term, while the possibility of a necessary deflation demands that a proportion should be liquid. Subject to these limits there is room for considerable elasticity in the advances made. Such a loan as the example given above, however, presents problems quite different from those presented by the re-organisation of, say, the iron and steel industry, the new plant that is required and the provision of funds for that purpose.

One concludes, therefore, that the banking system could assist the central bank in its endeavours to raise the price level by decreasing the proportion of its most liquid earning assets and increasing that of investments, and, if it can be done profitably, safely, and cautiously, increasing the proportion of advances. The action which the banking system may take can very well be more vital than the impulse of central banking policy initiating and conditioning that action.

Conversely, when the central bank is reducing the credit basis in order to bring about a fall in the price level that will maintain the external value of the monetary unit, the action of the banking system should be designed to facilitate this readjustment. First, a contraction in loans to the money market may be an unsuitable reaction to the new position established by the central bank, for it may drive the market to the central bank for accommodation,

and thus drive the latter to establish a higher discount rate to bring about an effective reduction in central bank money than should be necessary to effect a reduction in the price structure. Not only may short and long term rates be forced out of harmony, but the high bank rate, by attracting foreign funds, may mask the readjustment of the internal price structure necessary to preserve the external value of the monetary unit. So that in the absence of more accurate statistical information than is regularly obtainable at present, it will appear that equilibrium has been effected when in fact readjustment of dis-equilibrium has not been begun. Moreover, when business conditions are normally active, a high rate for short money is not a potent influence towards deflation, though it may be when business is critical and deflation is least likely to be necessary. Should the banking system meet the full force of central banking action by reducing deposits through calling in short money and later by reducing the volume of bills held, the central bank may find it difficult to bring about a fall in prices. For it may hesitate to use a bank rate which will have the effect of reducing the volume of central bank money sufficiently to induce the banking system to make the appropriate reduction in the volume of its other assets. This may be a limiting case, but any reduction in the volume of short money lent by the banking system may have a tendency to such a position, and the ideal, other things equal, is to maintain as low a bank rate as possible consistent with the external position. Though it may be necessary for a time when gold reserves are very low to attract funds from foreign centres, whether or not this course of action makes a high bank rate desirable should be decided by the central bank. It should not be coerced in its decision by the attitude of the deposit banks.

A greater deflationary impetus can be created by making long term borrowing more expensive, *i.e.*, by increasing the rate of interest on long term loans. The banking system can initiate such a movement by a reduction in deposits brought about by a sale of the appropriate securities; it will thus conform to the smaller cash basis provided by the central bank. Not only is this likely to be more efficacious in reducing expenditure than dearer short term loans—the effect of which will be felt abroad and tend towards an unwanted deflation in other communities—but it is likely to cause less disturbance to the business community than any other monetary force of equivalent potency. For the effects of reduced borrowing will be felt initially in a curtailment of new enterprise and not in a

disorganisation of old enterprises through credit stringency. In an elastic economic system a proportionately small sterilisation of savings would be sufficient to bring about a relatively high degree of deflation, but in a rigid system a large wastage of savings over a considerable period of time is likely to be required. In normal circumstances, a small rise in the rate of interest on long term, such as might be occasioned by a large sale of investments, would be sufficient to make unnecessary further sales, for a larger rise would be induced by the reactions of investors to a less margin of safety in industrial bonds and by a falling market in guilt edge securities. Generally then, a fall in the proportionate holdings of securities would do as much as lies within the power of the banking system to rectify the international position ; though it may be that in a time of rising prices the action of the banking system would be absorbed and further action might be necessary to help to initiate the movement towards a lower system of price levels.[1]

It is this contingency which provides one of the strongest arguments in favour of an easily variable proportion of advances among the assets of the deposit banks. By its action on the security market the banking system can only influence indirectly the volume of spending, but by an alteration in the volume of its advances it can exert this influence directly. The reduction in advances which the banks customarily make when confronted with the necessity of reducing deposits may be insufficient to damp down expenditure. Trade credits may be expanded by firms which, having liquid positions, place themselves in the position of bankers *vis à vis* their less liquid business associates : the velocity of circulation of business deposits may be increased also by firms financing themselves out of funds raised in the capital market and allowing their cash balances to fall, while the total of business deposits may rise as consumers reduce their unspent balances. A small reduction in advances may, therefore, be quite insufficient and stronger action may be necessary. In certain circumstances, however, a greater reduction may be very

[1] However possible it may be to analyse the monetary conditions necessary to initiate falling price levels, there remains the difficulty of completing the deflation by restoring equilibrium on the lower price levels. There are thus three problems involved. The stabilisation of *world* prices in order that deflation may be unnecessary, or, failing that, the adaptation of the system to make price levels move more harmoniously, and finally of organising the monetary system to make price levels rise or fall as the community desires. Although the last problem is the least fundamental it is probably the most urgent.

difficult, but it will be more possible if bankers have previously allowed their advances to increase not by making loans which are necessary to traders and manufacturers, but rather by advances which in favourable conditions can be recalled leaving the operation to be financed by other agencies—by mortgage institutions, the new issue market or investment corporations or by other agencies competing for the savings made by consumers. If the banks have a margin of such advances which are falling in or can be called in, it will be possible to reinforce their rationing policy of commercial and industrial advances, which cannot be carried very far without some danger to business stability, by a more active withdrawal of money from circulation. This is not to suggest that in some circumstances deflation can be any other than ruthless.

The conclusion that emerges from this part of the analysis is that if a higher bank rate together with pressure upon the price of fixed interest securities does not bring about the desired result, the banking system can take more direct action by curtailing advances wherever possible, and that this action can best be taken if the banking system is willing to allow fluctuation in the proportions which different assets bear to its deposit liabilities.

The function of managing the price level in conformity with the international position throws some light upon the function which Mr. Robertson stresses and which is related to the provision of a stable standard of values. Quite clearly, the efficient performance of the function of maintaining the external value may be antagonistic to the stability of prices, and may necessitate the wastage of savings or alternatively a greater quantum of investment through the banking system than the community commits to its care. In circumstances such as these a choice between different ends is inevitable, but this choice is not relevant to this note as the decision is made outside the banking system. Its primary function being defined, it is the task of the banking system to carry out its secondary function as efficiently as circumstances permit. When, therefore, one sets down the provision of a stable standard of values as a task of the system, as yet one regards it as a function relative to circumstances. In an international system this relative function devolves into a prohibition of price movements other than those necessary to maintain the international position, or in other words, into a maintenance of equilibrium between investment and saving through the banking system other than those managed disequilibria brought

about to affect the price levels relatively to other price levels.[1] The task of the banking system is to prevent upward and downward movements of the price structure, to discourage investment when activity is becoming feverish, to promote investment when the investor feels a suspicion of the future. The functions are, therefore, of the same order as those dealt with above, with the difference that pressure is never exerted to initiate an alteration in prices, but merely to prevent movement, and this may be necessary for external as well as domestic reasons.

This task is well illustrated in conjunction with another aspect of the preservation of internation equilibrium. The central bank is confronted with the necessity of maintaining satisfactory exchange relationships not only by the adjustment of relative price levels but by the adjustment of relative rates of interest. The foreign exchange market is not only an instrument for affecting the payments for imports of goods and services out of the receipts from the export of goods and services, but through it also are effected transferences of purchasing power on capital account from one centre to another. These transferences are made for the ostensible reason that the rate of interest in the lending country is low relatively to that in the borrowing country, and low enough, in a more absolute sense, to make borrowing profitable. When such a position obtains and the security of the borrower is deemed sufficiently sound at the rate of interest he is willing to pay, a transference of capital is effected. Ultimately the exports of the borrowing country and the imports of the lending country are restricted, and the imports of the borrowing country and the exports of the lending country are expanded. These alterations in the volumes of importation and exportation tend to be effected normally by an alteration in the price structures of the two countries relatively to that of the world and relatively to each other. Movements of capital occasioned by the existence of a differential in the rates of interest are results of the fundamental relationships existing between the two countries, so that over a period of time one can often be described as having the attributes of a lending country and the other those of a borrowing

[1]It will be understood that this function is defined in eminently unscientific language. The stability of the value of the monetary unit is relative to the thing or things that one wants to measure by that unit, and as so many people want to measure so many different things it is impossible to say exactly what we mean by this stability. But this uncertainty is related only to the particular points on the road we are trying to reach—it does not affect very much the direction of the road itself.

country. The rate of interest may be high in the borrowing country because of a wide and, perhaps, growing field for profitable investment, or because of a rapidly increasing population; the rate of interest may be low in the lending country because of the existence of large annual savings that cannot be absorbed by domestic investment at other than a low rate of interest because of stable national characteristics and stationary population. Such conditions may exist for generations. Consequently the flow of foreign securities into the lending country may be regarded just as much a part of its economy as a taste for Danish bacon or Egyptian cotton. It may be regarded, therefore, just as much a task of the banking system to adjust the price level to permit the import of securities without endangering the external value of the monetary unit as it is to make possible the consumption of imported goods commonly looked upon as necessities.[1] In a "free" economy, the existence of a long continued differential in the rates of interest makes necessary an adjustment of price levels to a position at which equilibrium will be obtained in the foreign exchange market. All interest rate differentials are not permanent, however, and the flows of capital that occur as results are sometimes transient, and they present, therefore, a fundamentally different problem to the central bank.

A system of prices may be too high or too low in a particular community to make possible purchases from and loans to other communities at the external value to which the central bank wishes the monetary unit to conform. A central bank may make three replies to such a situation: it may, as we have seen, operate upon the price level, but this action will be of no avail in particular circumstances. For whatever reason, bank rate may be raised in another country thereby attracting short money or causing a fall in the volume of loans made from that centre and a rise in that made elsewhere. Hence, for a time, until a new position of equilibrium is reached, there will be a tendency for the monetary centre we are considering to increase its foreign lendings on short term, and for a

[1] Because the desire to hold foreign securities is making difficult the maintenance of the external position, it does not follow that it is the duty of the central bank to decide that the import of foreign securities is a luxury that must be prohibited. The same could be said of all imports save those designed for re-exportation in some form. Similarly, the economist is standing on insecure ground if he makes the same recommendation, and he is taking a responsibility for which his special knowledge does not fit him. If it becomes necessary to choose between financing capital development abroad and our prejudice in favour of tea, coffee, cocoa, and sugar, surely other considerations than those usually termed economic must be weighed. The economist could not deny the expert on food values his right to solve the problem.

depreciation of the external value of the monetary unit to occur. The strain on the foreign exchange position will be immediate and pressing. Action designed primarily to secure a deflation of prices will not be appropriate to adjust the situation for deflationary action takes time to secure its results. Moreover, deflation to meet the new situation would have to give way to an inflationary movement when the differential in bank rates disappeared, and, as it is difficult and socially costly to alter price levels, this action appears socially inappropriate as well as economically ineffective. Deflation or inflation to meet a transient disequilibrium should, therefore, be avoided.

The banking system, therefore, must choose between the use of either or both of the other two methods of adjustment. One obvious remedy is to eradicate the cause of the disharmony by removing the recently established differential in short term interest rates, by raising bank rate and short term rates if short term lending is on too large a scale, and by lowering them if the reverse is the case. The task of the banking system is to adjust short term rates to avoid danger to the foreign position, and to preserve at the same time, as far as is possible, the existing price structure which there is as yet no reason to change. It follows, therefore, that the banking system must also endeavour to provide industry with the savings of the community at a price which makes the use of the savings profitable. If previously the system has been performing this function satisfactorily, the internal equilibrium will be disturbed if the increased interest rates are charged not only on that class of domestic borrowing which is insensitive to variations but on longer termed borrowing which is assumed in this note to be more sensitive. Hence it is necessary that the banking system should not restrict its advances to industry or reduce its holding of securities, and it may be desirable that the banking system should extend greater accommodation to traders financing their business by discounting, in order to offset to some extent the enhanced rate charged in the open market. In this way the volume of bills that the banks carry would tend to increase, and the *proportion* of assets in the form of advances and securities would also tend to increase. What is desirable also is that the banks should restrict its volume and proportion of short money assets to make central banking policy effective. Such will be the immediate reaction of the banking system to the new situation. In endeavouring to make its rate effective, the central bank will force the banking system into a position in which it considers necessary

the reduction of the volume of deposits. In the first place this will be effected by calling in short money, and ultimately by a proportionate reduction in all assets. It is the ultimate reaction that is inappropriate.

A further difficulty needs consideration. Although the fundamental forces operating upon the price of short term funds are different from those controlling the rate of interest on long term, yet it is impossible to treat one as being entirely unaffected by the other. The structure of the capital market brings about an immediate and close connection : a raising of short interest rates in the foreign centre will induce funds from the holding of relatively long term securities into shorter dated securities causing a sale of bonds and a general rise in interest rates, while the raising of the domestic bank rate for protective purposes will tend to have the same effect in the home market. Two results, therefore, are possible. The banking system can either attempt to support the bond market to offset the induced weakness resulting from the movement of funds that are not under the direct control of the system, and thus prevent a falling off in investment. Alternatively, it can allow the bond market to weaken and so deter new savings from seeking the more profitable openings which would otherwise be discernible abroad. It cannot, however, do both : the choice of one end necessitates the sacrifice of the other. Action designed to carry out the function of keeping in equilibrium the price and income structure of the community will tend to make difficult of achievement the attainment of exchange equilibrium. The raising of bank rate and the draining of funds from the money market prevent the movement of capital most susceptible to the existence of a differential in rates of interest in different centres, but they still leave a differential on funds invested for longer periods. *Ceteris paribus*, the tendency will be for investors to take up foreign bonds, but it is difficult to generalise about the effect either of this disposition of investors or of the weakening of the domestic bond market by which the banking system might counteract it. If the majority of investors are prone to look with suspicion on foreign securities it is conceivable that the fall in the foreign exchange might be slight, and the probability of this is *pro tanto* increased if the world demand for the goods and services of the country in question is of a high order.[1] On the other hand, if the

[1] If a gold standard is in operation it is conceivable that in these circumstances the fall in exchange will not go below the gold export point, in which case the central banking problem is automatically solved.

investor has a high regard for certain types of foreign securities and the world demand for the home products is very inelastic, the fall in exchange may be considerable.[1] Similarly, a small fall in the price of bonds, sufficient to offset any tendency for funds to flow abroad, may cause a negligible check to business activity under favourable conditions : on the other hand an alteration of a quarter of one per cent. in the rate of interest on bonds, necessary to rectify the external position, might under unfavourable conditions be a serious check to business recovering from a period of sub-normality. This is only to say, however, that the technique of banking in relation, at any event, to its social functions, is never likely to be reduced to an application of rules : the monetary system essentially requires management.

Under a gold standard régime, the banking system has still another instrument it can use if it is regarded as imperative that as little action as possible deleterious to business action should be taken. The movements, caused by discrepancies in earnings in different centres, that are most dangerous to the external position are the flow of short funds away from the cheaper market and the flow of bills towards that centre.[2] The strain upon an international centre arising from such a cause may make unavoidable the raising of the bank and open market rates unless the central bank's position is extremely liquid from an international point of view. A differential in the price of bonds is not likely to have such serious consequences if it is of a temporary nature, for funds seeking investments of this nature are not so fluid nor are they so sensitive. If in addition there is inertia to be overcome, the strain on this score is, for a

[1] If a gold standard is in operation, the tendency for the exchange to fall may be so great as to result in a considerable loss of gold, in which case the problem presented to the central bank is acute.

[2] The strain which may be placed upon the foreign exchange will tend to be a function of the volume of money held on foreign account and the volume of foreign bills carried. The first will be an index of the strain if circumstances make profitable the repatriation of funds : the latter gives an indication of the order of magnitude of the demands for discounting facilities a lowering of rates may entail. On both these scores the London market is peculiarly vulnerable. Here, again, it is difficult to make valuable generalisation. A central bank which *prima facie* appears unstable for these reasons may in fact be extremely strong, for if its position is unique, as that of London tended to be, a lowering of rates cannot bring forward a large volume of fresh demands for funds except in so far as it stimulates trade, while the advantages of holding balances in such a centre may offset any but a great loss of interest. A multitude of positions can be taken up between complete immunity and tremendous vulnerability, but to-day, apart from considerations of risk, an element of dis-equilibrium must result in every centre from the differential in earnings.

time at least, likely to be relatively small. The external position is safeguarded against movements such as this, and possibly against movement resulting from a small differential in short term rates, by the existence of gold reserves or the central bank holdings of foreign exchange. The movement of funds away from a particular centre because of a temporarily more profitable use elsewhere will tend to be reversed in the future ; consequently the loss of gold or exchange will only be temporary also and will return for use in similar recurring circumstances and will be a true reserve insulating the operations of the domestic economic situation against external monetary disequilibria.[1] This usefulness must be contrasted with the comparative insignificance of a gold reserve against exchange weakness caused by too high a price level, whether or not due or apparently due to too large a scale of foreign lending. The appropriate use of gold or exchange in the latter connection is not to prevent but to transmit changes in the price structures of economic systems.

Our own banking system is not well designed to make the most effective use of gold reserves. The method used to obtain equilibrium in the external position is the protection of the gold reserve, so that this protection tends to become an end in itself. And so long as the note issue must be covered by gold, this must inevitably tend to be so. Failing, however, the re-organisation of the Bank of England on the lines suggested in the Macmillan Report, a certain improvement could possibly be made by influencing the banking system to allow modifications in its ratio of cash to deposits.[2] A greater volume of gold export could then be allowed before further preventive action became necessary without reducing the strength of the central bank's position : but it is doubtful if the relief to be obtained by the possible reduction in the banks' note holding would be very great. The modification of the ratio of cash to deposits is essentially a second best improvement.

The banking system cannot operate satisfactorily by reference

[1]The operation of the Exchange Equalisation Fund, divorced as it is from the issue of currency into circulation, adds point to the argument that a gold or foreign exchange reserve should be used freely to stabilise the external position and not as a rather pointless backing to the note issue.

[2]The exchange by the banking system of notes for central bank money would allow greater latitude in the gold holding of the central bank because it would strengthen the proportion in the Banking Department. A change in this direction has already been made. An influx of gold is not so difficult to deal with as an efflux because it is always possible, even under the present system of separate issue and banking departments, for a sale of securities to sterilise a gold import that is occasioned by a temporary differential in interest rates.

to the criteria of solvency or profitable working, or even of the needs of industry and trade. Upon the central bank must fall the task of controlling the policy of the monetary system, and, ideally, of carrying out in more detail the action the policy implies. Whether deflation must be suffered or interest rates kept low, whether bank rate must be increased or can be avoided by small gold exports are obviously questions which it is the responsibility of the central bank to decide, and they can only be decided in relation to the diagnosis of the condition of the economic system and the strength of the bank itself.

The problem is reversed when foreign monetary centres reduce short money rates below those effective in the market considered. The necessity for immediate action is not so urgent in this instance as in the preceding one, for no dangers threatens the performance of the primary function. The central bank may accept gold imports or foreign exchange and prevent any reaction on the internal position by offsetting gold purchases, or it may take the alternative course of adjusting interest rates; it is the appropriate reaction of the banking system in the latter case that demands consideration. A lowering of bank rate in normal circumstances will tend to upset the adjustment of price levels relatively to themselves and relatively to other price levels, and thus tend to internal disequilibrium. By lowering money rates, the central bank will increase the amount of its money held by the banking system, and thus make possible a general expansion of assets and deposits. Again, a fall in short money rates will not be perfectly localised: interest rates generally will fall and the movement will be reinforced by the purchase of securities by the banking system. Hence, there will be a tendency for bank deposits to become more active as well as enlarged. Normally, therefore, an inflation of the price structure will be evidenced. As interest rates have not been re-adjusted because of a disequilibrium in price levels, this inflationary tendency will necessarily have to be checked when money rates abroad rise once more. Hence, the appropriate action of the banking system is to prevent inflation and retain the existing price structure. A reduction in bank rate and money market rates allied to it can be localised to some extent if the banking system refrains from using its larger cash basis to enlarge its advances and security holdings. To retain the existing price structure it may be necessary to reduce deposits by the sale of securities to meet the increased demand for long term securities that results from the lower profitability of lending on short term or of

running bills. In conformity with its twin functions, the reply of the banking system will be an enlargement of deposits by increasing money at call and a contraction by the sale of securities, and, according to circumstances, there may be a net increase or a net decrease in deposits. The maintenance of existing rates on long term loans and bonds will tend to attract the attention of foreign investors, so that one would expect a tendency for the external value of the monetary unit to appreciate, and the central bank may, under a gold standard system, be forced to accept increments to its gold reserve. These can be offset by the sale of securities, and the original structure of its assets will once more be obtained when interest rates alter to their original relative position and gold tends to flow out.[1]

When the price structure is being insulated from changes resulting from the differential in interest rates, the appropriate reaction of the banking system is away from the position which the motive of gain would suggest. When interest rates are being raised, the appropriate action is to prevent money from earning that higher rate of interest and invest assets in long term securities on which the rate of interest has increased little. Alternatively, when rates of interest are being reduced, the appropriate action is to lend more at that reduced rate, and sell, instead of buying, the more profitable longer dated securities. In both cases, advances should appropriately be stabilised, unless the banking system finds it difficult to maintain interest rates at the required level ; in which case it may be necessary to increase advances as interest rates tend to rise and decrease them as rates tend to fall : this may also be necessary if the system fails to respond to the interest rate established. Apart from this, however, there appears to be nothing appropriate to the situation in increasing the charge for advances when bank rate is raised to protect the external position, or, equally, in lowering rates when bank rate is lowered in sympathy with rates in other countries. Although the demand for advances may be insensitive to changes in the rate charged, alterations *may* tend to induce changes in the internal situation ; while if equilibrium is disturbed, the tendency may be to move away from and not to return to the pre-existing equilibrium. The same argument can equally be advanced against alterations in the rate paid on deposits. An

[1]The exchange of securities for gold results in a loss of revenue to the central bank, so that on this account there is reason for suggesting the advisability of the banking system increasing its ratio of cash to deposits when the central bank does not wish to use the additions to its gold reserve.

alteration in the rate of interest on deposits if it has any effect at all, will tend to influence their velocity of circulation, and thus a lowering of the rates will tend to strengthen prices and an increase in the rates will tend to weaken prices. Neither of the effects is wanted in these circumstances; if any movement at all is necessary that opposite to the one obtained at present would be desirable. When bank rate falls, for the reasons we are considering here, a fall rather than a rise in the velocity of circulation of deposits is needed; when bank rate rises, an increased velocity of circulation is desirable.

In conclusion, then, when the cash basis is reduced for reasons such as those considered, the appropriate action will be to increase the proportion of assets relatively less liquid and decrease the proportion of assets relatively more liquid, and when the cash basis is increased the reverse is true. In both cases the appropriate action may not be fully realised if the banking system adheres even to a fixed proportion of *cash* to deposits. For, in the first case, in order to offset some unavoidable rise in interest rates, it may be appropriate to increase deposits by purchasing securities and increasing advances by more than the reduction in deposits necessitated by calling in money at call and short notice to make bank rate fully effective. On the reduced cash basis, therefore, a smaller proportion of cash to deposits may be advisable, though it appears impossible to draw a conclusion generally applicable.

So far we have been concerned with the short term variations that may be desirable in the structure of the assets of the banking system. The conclusions arrived at do not justify an assertion that the proportion of funds invested along a certain line will under present circumstances be too large or too small. All that it is possible to suggest is that *in particular circumstances* it will tend to be too large or too small, and the most emphatic conclusion is that the criterion of what is desirable should not be the proportion that certain assets bear to certain liabilities, but the appropriateness of the proportion to the socially important functions of the banking system. Beside the possible desirability of variations in the structure of assets, over short periods of time, alterations that are not transient to meet transient conditions but permanent to suit permanent alterations in the services desired of the banking system may be needful.

In a community that has at its disposal a certain volume of bank credit money with which to conduct a money economy, saving can be effected substantially in no other way than by a

reduction in the velocity of circulation of deposits, in the sense of a reduction in the rate at which deposits change hands against the provision of services. The investment of these savings that are made by the members of the community comes about by the handing over of the bank balances to persons or investors designing to spend them. Hence, investment comes about by increasing the velocity of circulation of deposits. Thus, whether the individual uses his savings for building a house, or lending them to an entrepreneur to expand a factory, or for exchanging them against securities with another doing any of these things, this velocity of circulation is increased. When a firm uses its surplus on the year's working to increase production or when a state or authority borrows money to make roads or pay out pensions and benefits the same result occurs. Of course, certain investments by individuals do not result in more spending because other individuals may retard the velocity of circulation of the balances they receive. In general, therefore, for saving to be used, either " productively " or " unproductively," the tendency towards a reduction in the velocity of circulation must be offset by a quickening in the rate due to investment. There are, however, certain reasons why saving and investment involves a more difficult intellectual problem than this setting presents, however difficult some attendant practical subtleties may be. Given a fixed amount of money, the natural tendency in a growing and advancing community is for the velocity of circulation to diminish, *i.e.*, for the demand for bank balances to increase. As population grows, new active entrants into the economic system try to establish balances for purposes of convenience, nor is the desire of older members to continue their holdings of existing balances thereby effected. Moreover, every increase in the wealth of the members of the community tends to encourage the luxury of holding greater money balances with the banking system. Again, there must necessarily exist a time lag between saving and investment, so that in a community that is tending to increase its income and its savings, there must continually be a tendency for saving to be greater than investment during any given period of time. In order, therefore, that a community shall spend as much as it earns, and in order that an equilibrium in the price structure shall not continually tend to be disturbed, it is necessary for purchasing power in the form of new credit money be put in the hands of those willing to spend it. During any period of time, therefore, the creation of credit money should take place to satisfy the demands for additional bank balances and

to obviate the effects of the time lag between saving and investment. Upon the central banking authority must fall the responsibility of initiating, regulating and checking this process.

The problem to be analysed here is the possibility of the banking system effecting the creation of credit, assuming throughout that the central bank is prepared to create the conditions the system feels necessary for this end. The assets of the banking system consist to a very large extent of credit money placed at the disposal of entrepreneurs desiring funds for the purchase of circulating capital. Thus a large proportion of advances is for the purpose of financing production in a system already or otherwise provided with fixed capital. Bill holdings and the advances to the discount market are chiefly used for the purpose of financing the sale of the commodities to obviate the crystallisation of circulating capital of entrepreneurs who find it necessary to give credit to customers. Only in the case of government bill holdings, short advances to the stock exchange and advances for " non-productive " purposes[1] are assets other than long dated securities divorced from the provision of working capital. A proportion of assets consists directly or indirectly of securities issued to facilitate the provision of fixed capital. Thus advances to customers carrying securities or to the stock exchange are of this nature, while the remaining funds are advanced directly or indirectly to people or institutions desiring to spend more than they earn or receive. Not in every instance does the increase in the assets of the banking system result in spending to obtain the services of factors of production. When funds are placed at the disposal of entrepreneurs to finance production or trade there is immediate investment, and so, too, when advances are made to the state for the purpose of financing ordinary or extraordinary expenditure. But it is not necessarily true when advances are made to carry securities or when securities are bought directly. In order that funds should be passed on to the community to be spent equivalent in amount to those the community has saved, the banking system must make direct advances " which get into touch with commodities " or induce people to spend deposits the banking system has created in purchasing other assets.

It is conceivable that in the course of time the volume of new direct investments that the banking system can make by funds

[1] From the evidence to the Macmillan Committee it appears that the banking system endeavours to keep such advances as low as possible in order to extend credit to industry and commerce.

placed at the disposal of industry and commerce will tend to become a smaller proportion of the total investment which the system is called upon to effect on account of the tendency for the velocity of circulation to diminish. This might result, for example, through economies in the volume of circulating capital. Or the reverse might equally be true because of a lengthening of the average period of industrial gestation. Given the relationship, therefore, between the rate of interest on long and short term loans, the tendency should be in the former case, for advances and bill holdings to fall in relation to other assets, while the reverse is true in the latter case. A reduced demand for circulating capital in relation to the aggregate of production could be compensated by the action of the banking system in relieving investors of securities in return for deposits with which they can take up other securities issued by entrepreneurs wanting more fixed capital. In that way the demand for increased deposits and the demand for fixed rather than circulating capital would be satisfied. Thus the proportion of holdings of securities will be increased. An increased demand for circulating capital in relation to the aggregate of production could be met by the expansion by the banks of accommodation to entrepreneurs and a reduction in the proportion of assets held as securities. Thus the proportion of assets in the form of advances and bills held will change in either case and tend towards a new level in consonance with the changed demand of industry for different forms of capital.

If we assume that the economic system is tending to economise in the use of circulating capital, two disharmonies may follow unless the banking system is willing to vary the proportions of assets held. Either the banking system will endeavour to force its funds into advances and fail, owing to the lack of demand for this form of finance, bringing the consequences of deflation and wasted factors of production. Or it will succeed in its endeavours by reducing the charge for advances, leaving the cost of long term borrowing unchanged. The effect of this action will be to increase the use of circulating capital and reduce the quantum of fixed capital beyond the amounts that are economically desirable. Even under present conditions, there is no reason to suppose that the charges made for advances by the banking system is nicely adjusted to the rate on long term borrowing in proportion to the relative risks and costs involved. A manipulation of charges, however, to secure a " correct " proportion could only bring a fortuitous improvement, and would *tend* to make for greater mal-adjustment.

Much the same considerations are relevant if it be supposed that there is a tendency for industry and trade to be financed by advances and loans in the place of bills. In order to obtain a customary proportion of money at call, the banking system will be forced to accept lower rates to obtain the quota desired of a decreased demand for such accommodation, while to obtain short term securities to suit their customary needs they will be forced to offer higher prices for bills purchased as investments. Conversely to limit the demand for advances, the banks will be induced either to charge higher rates or ration loans made or both. Thus the former rates will tend artificially to be reduced and the latter to be increased, thus favouring the development of enterprise to which the former method of finance is suitable and hindering the expansion of enterprises finding it more convenient to use the latter method. In the absence of evidence to the contrary, therefore, one must conclude that this action of the banking system would be deleterious to economic welfare.

Over a period of time there is reason to expect that the appropriate proportions of assets will change with the changing structure and needs of business. Therefore, in order to perform its socially appropriate functions, the banking system will find it necessary to vary the proportion of assets, and a failure to do this will prevent the optimum social income from being enjoyed.

While short period alterations are taking place around an equilibrium position either of the industrial or monetary systems, it is desirable that the banking system should so adjust its holding of different kinds of assets as to retain or safeguard as surely as possible that equilibrium position. When the equilibrium position of industrial organisation itself is altering, the action of the banking system should be designed to facilitate the transition to or through the new position or positions, and not to petrify in an arbitrary way an organisation tending continually to change.

JACK STAFFORD.

THE SUPPLY OF ELECTRICITY IN INDUSTRIAL LANCASHIRE

In subsequent issues of this journal it is intended to present a series of indices relating to the various phases of economic activity in Lancashire, which will be compiled by the research section of the Department of Economics, Commerce and Administration of the University of Manchester. Most of these indices will take a form familiar to those acquainted with the various national indices which are now published from private and public sources. The statistics which it is intended to publish relating to the supply of electricity, however, are not so commonly used in this connection and it has been thought advisable to present the following analysis of the meaning and significance of them.

The statistics available concerning electricity supply refer either to the North-Western Electricity Area or to the Manchester University Industrial Survey Region.

The North-Western Electricity Area is the area covered by the North-West England and North Wales Electricity Scheme, which was prepared by the Electricity Commissioners and adopted by the Central Electricity Board in 1928 in pursuance of section 4 of the Electricity (Supply) Act, 1926. In 1928, this Area comprised (wholly or in part) the areas of supply of 122 authorised supply undertakers, and the number of public generating stations in operation or contemplated in the Area was 70. The Manchester University Industrial Survey Region is composed mainly of the manufacturing districts of Lancashire along with adjacent portions of Cheshire and Derbyshire[1], and lies wholly within the North-Western Electricity Area. In 1930, it contained (wholly or in part) the areas of supply of 58 authorised undertakers and the number of public generating

[1]This area was adopted in the Industrial Survey of the Lancashire Area (excluding Merseyside), which was made for the Board of Trade by the University of Manchester in 1931. (See chapter ii of the Report upon this Survey, entitled " The Electricity Supply Industry ".) Within Lancashire, the Survey Region comprises the territory which lies to the south of a line drawn eastwards from Lancaster to the county boundary, and to the east of a line following the coast from Lancaster to Preston and thence through St. Helens to Widnes.

stations therein was 40[1]. The North-West England and North Wales Electricity Scheme lays down which of the existing or new generating stations in the Area shall be " selected " stations for the generation of electricity to the direction of the Central Electricity Board when the " Grid " Scheme comes into operation. It appears that of the 27 existing and 2 contemplated stations " selected " in the Area as a whole, 23 existing and 1 contemplated are located in the Survey Region.

The statistics presented will relate to the following subjects :

A. *The North-Western Electricity Area*—number of units of electricity sold to consumers by authorised undertakers, in each year.

B. *The Manchester University Industrial Survey Region :*

i. Total number of units of electricity generated in the Region at the generating stations of authorised undertakers, in each year.

ii. Total number of units sold to consumers[2] by authorised undertakers in the Survey Region, for each of the following purposes :

(*a*) lighting and domestic supplies,

(*b*) public lighting,

(*c*) traction,

(*d*) power.

These figures are available annually.

iii. An analysis of units of electricity sold to industries by certain authorised undertakers in the Region. In the first instance, particulars will be given for a number of years up to and including 1930–31 in respect of seven important undertakers, viz., the Manchester, Bolton, St. Helens, and Oldham Corporations, Stretford and District Electricity Board, the Lancashire Electric Power Company, and the Mersey Power Company Limited, and efforts will be made to continue these particulars in future and to bring other undertakers within the sample.

[1]The boundary of the Survey Region cuts across the boundaries of the areas of supply of certain of these authorised undertakers, *e.g.*, the Lancashire Electric Power Company and the Mersey Power Company Limited.

[2]*i.e.*, excluding bulk supplies given to other undertakings.

The following explanatory and introductory notes are intended to be read in conjunction with the statistical data :

I

Sales to consumers by authorised undertakers in the North-Western Area may usefully be referred to for two purposes. Firstly, they may be compared with the estimates of the probable rate of growth of sales in the Area up to 1940–41, which were adopted and used by the Electricity Commissioners in preparing the Area Electricity Scheme in 1928[1]. Trade depression has caused the actual total of units sold to fall far behind the estimated total in the year 1929–30, and it is practically certain that the gap will prove to have widened in the year 1930–31.

The actual and the estimated sales for the years 1927–28 to 1929–30 may be compared in the following table :

Year ended 31st March	Actual Sales Recorded (million units)	Estimated Sales (million units)
1928	1,471	1,475
1929	1,583	1,641
1930	1,723	1,840

Secondly, these statistics afford a basis of comparison with sales to consumers by authorised undertakers in the Survey Region, and enable relative rates of growth in the two areas to be studied. In the year 1929–30, sales in the Survey Region totalled 1,276 million units, or 74·1 per cent. of the total sales in the North-Western Area.

II

The statistics of units generated at the generating stations of authorised undertakers in the Survey Region will provide an index of the growth of output of the public electricity supply industry since 1920–21. Between 1920–21 and 1929–30, output increased by about 140 per cent., the outcome of a rapid upward secular trend which was interrupted seriously by trade depression in 1921–22 and to a minor degree by the effects of the stoppage in the coal mining industry in 1926–27[2]. A further set-back is revealed by the figures for 1930–31.

[1]These estimates are given, and the manner of arriving at them is explained, in the " Supplementary Particulars " relating to the North-Western Area Scheme, published by order of the Central Electricity Board in 1928.

[2]Total output of electricity at generating stations of authorised undertakers in Great Britain as a whole increased by 143 % between 1920–21 and 1929–30. In 1929–30, the total units generated in the Survey Region constituted about 15 % of the total output in Great Britain.

III

The figures of units sold, classified according to the type of consumer, afford a more detailed index of the progress of the supply industry, and show the relative importance of the different items in total sales. Lighting and domestic supplies cover supplies to domestic consumers and also supplies for commercial lighting and heating. " Public lighting " refers mainly to the lighting of public thoroughfares. Traction supplies are taken principally by electric tramway and omnibus undertakings.

Between 1920–21 and 1929–30, total sales to consumers in the Survey Region increased by about 130 per cent.[1]. " Public lighting " is an unimportant item and sales for traction purposes appear to be stationary, so that interest centres round the expansion of the lighting and domestic and the power sales. In 1929–30, these items accounted for 18·4 per cent. and 70·9 per cent. respectively of the total sales. The power load, notwithstanding the effects of trade depression in 1921–22 and of the coal stoppage in 1926–27, has more than doubled since 1920–21, whereas in the same period sales for lighting and domestic purposes increased by more than 300 per cent. Power sales, however, constituted at least 70 per cent. of total sales in every year between 1920–21 and 1929–30. The 1930–31 figures of power sales show a decline from the 1929–30 level, which more than offsets the increase registered by lighting and domestic sales.

The predominance of the power load is more pronounced in some areas of supply than in others, as the following figures for certain areas in 1929–30 show :

	Lighting and Domestic Sales (million units)	Power Sales (million units)
Blackpool Corporation ...	15·79	2·86
Burnley ,, ...	5·54	2·50
Manchester ,, ...	66·15	196·45
Nelson ,, ...	2·70	2·44
Preston ,, ...	11·40	13·16
St. Helens ,, ...	2·80	33·84
Stretford and District Electricity Board	3·97	60·40
Mersey Power Co. Ltd. ...	1·50	61·49

[1]In the Survey Region, the average number of units sold per head of population rose from about 170 in 1922–23 to over 330 in 1929–30. In Great Britain, on the other hand, the average number per head increased from 88 to 195 in the same period, and the percentage increase in total sales between 1920–21 and 1929–30 was 147.

An undertaking which is mainly dependent upon the industrial power load is more likely to encounter a serious set-back in years of trade depression than an undertaking which possesses a relatively large and increasing domestic demand.

IV

There are, as yet, no electricity statistics on a comprehensive scale which can be used to furnish an index of the level of current business activity in the Survey Region. Any figures of total units sold to industry by authorised undertakers are of little value for this purpose so long as the secular trend of such figures shows such a strongly marked upward tendency. At the present time, it is not possible to assess the relative importance of the various factors which may foster or, on the other hand, check the expansion of the power sales of authorised undertakers, so that it is equally impracticable to measure such changes in power consumption as are attributable to fluctuations in business activity. For, in the last decade, the electric power load of authorised undertakers gained considerably at the expense of the load upon private electric generating stations and of mechanical driving. The conversion of a firm from mechanical to electric driving, or the substitution of electricity purchased from an authorised undertaker for factory-produced electricity, does not, of course, represent a net increase in the amount of power consumed by industry. There is no reason for believing that in the Region as a whole the upward secular trend of power sales will not continue for many years. Consistent with this, however, it is possible that sales to individual industries in particular areas of supply may furnish a reliable index of the degree of activity in those industries. Such would be the position in an industry whose mechanical equipment in a given area was almost completely electrified and, moreover, driven by electricity purchased from an authorised undertaker. As yet, statistics from which instances of this kind might be ascertained are rare in the Survey Region.

In the first place, the aggregate capacity of private electric generating plant in the Region or in any industry therein is not known[1]. Yet there is a considerable quantity of such plant installed in the cotton, coal mining, and other industries. The Censuses of Production, for instance, provide material relating to the cotton

[1]Similarly, no means appear to be available of estimating the aggregate capacity of electric motors installed in industrial establishments, driven by electricity which is not purchased from an authorised undertaker.

industry in the United Kingdom, which may reasonably be taken to indicate the position of the industry in the Survey Region. In 1930, the total capacity of electric generators installed in the cotton trade in Great Britain was 141,473 kilowatts[1]. In the same year, 31·9 per cent. of the total capacity of motors installed at factories represented motors driven by factory-produced electricity, and 28·3 per cent. of the total quantity of electricity used for all purposes was generated at the firms' own works.

Secondly, the extent to which electric driving has been adopted in the industries of the Region cannot be determined, even approximately, except in the case of the cotton industry, until the authorised undertakers collect information as to the distribution of available power in their areas between mechanical and electrical application. The Manchester Corporation undertaking appears to be the only one to have done this in late years. The result of a recent investigation is to show that in its area in eight industries taken together—engineering, cotton spinning and weaving, saw mills, timber yards and packing case works, woodworking and cabinet making, rubber, general printing, newspaper printing, and brick-making—nearly 80 per cent. of motive power is applied electrically. Steam is the only considerable competitor, accounting for 57 per cent. of total power in cotton and 73 per cent. in brickmaking. The situation in engineering is noteworthy. Electric driving using electricity purchased from the Corporation is almost universal. Here appears to be an industry within a limited area whose purchases of electric power (as revealed by the Corporation's annual figures of units sold to this industry) should in future years provide a sufficiently reliable index of its business activity. Further material relating to the cotton industry is furnished by the Censuses of Production. The percentage of the total available power which is applied mechanically in the industry fell from about 82 in 1924 to about 73 in 1930, this being due mainly to the advance of electric driving at the expense of the mechanical application of steam power. It is obvious, however, that there is still much scope for the extension of electric driving, and assuming the degree of electrification continues to increase (as it did in the years 1924–30), the resultant growth in consumption of electricity will be a further factor, in addition to the one above-mentioned (viz., the substitution of electricity purchased

[1] At the end of the year 1929–30, the aggregate capacity of generating plant installed at the generating stations of authorised undertakers in the Survey Region was 1,042,000 kilowatts.

from an authorised undertaker for factory-produced electricity), operating to prolong the upward secular trend of power sales to the industry by authorised undertakers in future years.

V

Up to the present it has only been possible to obtain an analysis of units of electricity sold to industrial establishments from the seven authorised undertakers mentioned above. Apparently, it is not yet customary for all undertakers to classify their sales to industry in this way. The sample already procured is, however, large. In 1929–30 it covered a total of 533·7 million units sold for power purposes, equivalent to 59 per cent. of the total sales for the Survey Region. It is hoped in the near future to increase the sample to one of 80—90 per cent. by adding the county borough undertakings not yet covered and certain municipal borough undertakings whose power loads are of particular interest. Meanwhile, the particulars for the seven undertakings bring out certain important points. Firstly, they reveal that the engineering, cotton, and chemical industries are the principal users of electric power purchased from authorised undertakers. Secondly, it appears that since 1923–24 sales to chemical and engineering concerns have expanded much more rapidly than sales to cotton spinning and weaving firms. The figures of sales to cotton spinning and weaving firms by the Bolton, Manchester, and Oldham Corporations and the Lancashire Electric Power Company raise a strong presumption that the growth in the quantity of purchased electricity consumed in the cotton industry between 1924 and 1930 was much smaller than the increase (of nearly 40 per cent.) which took place in the same period in the capacity of electric motors, driven by purchased electricity, installed at factories in the cotton trade, as shown by the Censuses of Production[1]. Thirdly, the particulars show clearly the increasing importance to the electricity supply industry of sales to the new, expanding industries in the Region, in which establishments are generally using electric power from the beginning. In fact, the sample gives fairly detailed indication of the directions in which the supply industry must look in future years for accessions to its sales for industrial power purposes.

A. WINTERBOTTOM.

[1]For the four undertakers named, in no year between 1924–25 and 1930–31 were the sales of electricity to cotton spinners and manufacturers more than 24 per cent. higher than the level of sales in 1924–25.

REVIEWS

Papers on Gold and the Price Level. By Sir Josiah Stamp. (P. S. King. 1932. 7s. 6d.)

In order to achieve two ends, the author in this volume collects addresses and articles produced over a number of years. First, to emphasise the desirability of stability in prices, Sir Josiah traces the ill-effects resulting from our unconcern—diminishing but still almost unbelievable—at the possession of a standard of value linked directly to gold, and indirectly, through chains still unfortunately almost unrecognised by the general public, to the dollar, the fortunes of an essentially speculative industry, to reparations and war debts, to tariffs and nationalism, and to unimaginative central banking customs and regulations. It is a field in which the economist can employ with confidence his social science, and the author takes full advantage of these opportunities. In the introduction we are reminded of Morley's words—that the "agitator must not be afraid of incessant repetition . . . . The fastidiousness which is proper to literature, and which makes a man dread to say the same thing twice, is in the field of propagandism mere impotency." Whether or not the repetition present in Part I. is to be accounted a fault must, therefore, depend upon whether Sir Josiah intends these papers to be further propaganda or a contribution to economic literature, and this is by no means to suggest they are not both.

Secondly, in Part II., scientific analysis is subjected to the test of time, and the judgment of the reader, by a presentation of Sir Josiah's views on problems attracting his attention between 1911 and 1928. We are reminded of the necessity of stability in the price level, or, if that is impossible, of the necessity of remembering that we have not attained price stability, by the discussion of such different problems as the taxation of land values, the burden of the national debt, and the situation of the coal mining industry. By reading warnings uttered during the difficulties of the post-war years, we live again, and with more understanding, through the inflation which had such disastrous effects upon Lancashire, the

deflation which finally jerked us on to the gold standard, and the deflation to which the gold standard subjected us. Time has brought again the circumstances attending our choice of 1925—circumstances regarded with so little imagination : it will be a tragedy if, in another seven years time, Sir Josiah is given the melancholy opportunity of justifying once more the science of which he is such a master ; and it is to be doubted if he would still remain the least cynical and most hopeful of our monetary scientists.

J.S.

The Nature and Significance of Economic Science. By Lionel Robbins. (Macmillan. 1932. 7s. 6d.)

Economic Tracts for the Times. By G. D. H. Cole. (Macmillan. 1932. 12s. 6d.)

It would be difficult to find two books more interesting to read in conjunction than the two whose titles are at the head of this brief notice. In the one, Professor Robbins is concerned with the subject-matter and the generalisations of economic science and with the limitations and significance of these generalisations. In the other, Mr. Cole is mainly concerned with the type of problems on which, during the last twenty years, he must surely have been the most prolific writer in this or any other country. Mr. Cole has always proclaimed himself a "rebel" against the existing social and economic system, but his rebellious mind has never been content to contemplate a breach in the system with nothing ready at hand to repair it and make the system more appropriate to its purpose than it was before the breach. Consequently, although his writings contain much which he would doubtless regard as a necessary clearing away of lumber they invariably contain something intended to occupy the empty space. Before the war Mr. Cole had comparatively few academic competitors in his task as critic and draughtsman, but since the war he has had many more, and now it is not unlikely that he finds his intellectual association with some of them far more congenial than in his earlier days, indeed, had he not written his present book a large part of it might have been written by one of them.

The title of the book, as it should, indicates its contents. They consist of seven papers under the general heading " The Economic Crisis," four under " Economics in Theory and Practice," and four

under "Socialisation." That Mr. Cole has written the papers is guarantee of their quality, and most certainly they should be read, especially by those whose minds are inclined to stagnate. Those who wish to become acquainted with Mr. Cole's views on how economic data should be treated and presented by expositors will find the second of the three groups of papers of particular interest.

If Mr. Cole were asked why he is interested in economics he might be expected to reply that it is because it yields knowledge which he can apply to the attainment of certain ethically desirable social ends which he would summarise as socialism. Assuming that Mr. Cole gave this reply, which is quite an intelligible one, it would reveal him as a man acquainted with the generalisations which constitute economic science, capable of showing how they should be applied in practice, and competent of judging which are, and which are not, the ends towards which society ought to strive.

It is here where a reading of Mr. Cole's book and that of Professor Robbins in conjunction becomes interesting. Possibly, Professor Robbins would not contest the claim which is implied in the assumed reply of Mr. Cole, though he might suggest that its fulfilment would put a great strain on the versatility of any ordinary man, and he would certainly contest any suggestion that it was incumbent upon an economist to fulfil the claim. According to Professor Robbins the economist *qua* economist is concerned with economics, and "Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses." For the economist these ends are given; they are any ends, not only material ends, which people actually seek after and attain. As between these ends economics is neutral. "Economics cannot pronounce on the validity of ultimate judgments of value." Such pronouncement is the business of ethics and "it does not seem logically possible to associate the two studies in any form but mere juxtaposition. Economics deals with ascertainable facts; ethics with valuations and obligations . . . . Between the generalisations of positive and normative studies there is a logical gulf fixed which no ingenuity can disguise and no juxtaposition in space or time bridge over."

These quotations will give some indication of Professor Robbins' views of the relation of economics to ethics and, if space permitted, other quotations of a similar character might be given of its relation to technology, economic history, psychology, and so on. As already

stated the contention of Professor Robbins is that economics, as a branch of science, is concerned with the phenomena which arise out of the relationships between men and the ends that they seek but for whose attainment their means are scarce. He contends that, in his study of these phenomena, the economist is necessarily in touch with all reality, but for the economist to import into this study considerations which do not essentially belong to it is to concern himself with irrelevancies and to destroy any claim he may have to speak with authority.

In writing thus, it is the opinion of the present writer that Professor Robbins has made a valuable contribution at an appropriate time, and his readers may well look forward to the book on general economic theory which he promises. Even so, one fears that neither the present nor the forthcoming book will have much effect in confining Mr. Cole to a study of economic generalisations or in preventing him, as an economist, from applying them to a realisation of those ethically desirable social ends on which he is an authority. " Scratch a would-be planner and you usually find a would-be dictator," says Professor Robbins in one part of his book. Surely this epigram cannot possibly have relevance to any English economist !

G.W.D.

Modern Currency and the Regulation of its Value. By EDWIN CANNAN. (P. S. KING. 1931. 5s.)

THIS book is at once a plea and an argument for a more rational monetary policy and an exposition of a monetary theory—the author would write a currency theory—in many ways opposed to that held by other economists of an intellectual vigour equal to even that of Professor Cannan. To the student the first three chapters should be of value, for no writer on economics can state a case or drive home a point more emphatically or more lucidly than the author. And though here and there the logicality of the argument may not be strong enough to convince the teacher it is probably too strident to raise many doubts in the minds of the taught.

To recommend the student of monetary theory to beware of Chapter IV. is perhaps to herd ourselves with the goats, but the reviewer has never been able to understand how Professor Cannan wears his fleece so comfortably.

J.S.

Tariffs: The Case Examined. By a Committee of Economists under the Chairmanship of Sir WILLIAM BEVERIDGE. (Longmans Green. 1931. 7s. 6d.)

IT is doubtless a matter of some surprise that while we have witnessed a sweeping change in the fiscal policy of Great Britain, there still remains a remarkable dearth of tariff literature. Of tariff propaganda and of course anti-tariff propaganda, there has been a super-abundance. What we have lacked is an attempt at comprehensive scientific treatment. But it is a thankless task if only on account of its complexity, and since Professor Gregory published his book in 1921[1] little or nothing has been added. In these circumstances there will be few who will not accord a welcome to this volume produced by so eminent a body of economists. But as one might gather from the title the work is something more than pure analysis, as all controversies centring round public policy tend to be. "We have surveyed once more in the light of to-day, the well-trodden fields of this ancient controversy. After that survey we should all think it a disaster if the policy of Free Trade which has served Britain so well materially, as through her it has served as an inspiration to all who in any land have worked for good understanding among nations, were to-day to be sacrificed to ignorance or panic or jealousy or specious calculations of a moment's gain." So concludes the preface. However much one may be convinced by the arguments on fundamental points, the feeling still remains that more could have been said on the other side. But it is equally true that those who may have been convinced of the efficacy of the tariff by some facile proposition, will here find good reason for a re-examination of the problem. For the most part the arguments used are negative—but it is by this means that emphasis is given to the many serious difficulties of a practical nature which the adoption of the tariff instrument brings. The chapter on dumping by Sir William Beveridge is of particular interest. Sir William's main objection to the use of the tariff as an offset against dumping is the prejudicial reaction on legitimate price discrimination. He pays special attention to the evils attendant on systematic monopoly dumping and state aided dumping and proposes to deal with these through international convention, stipulating for duty free re-import to the country of origin, and the right of each state absolutely to prohibit imports

[1] *Tariffs: A Study in Method.* (Griffin.)

when their price had been artificially cheapened by subsidies from another State, subject to appeal to some international tribunal. This would seem still to leave the difficulty of defining dumping, and the elements of uncertainty and delay would in all probability not be eliminated.

S.G.R.

The World's Economic Crisis. Halley Stewart Lectures, 1931. By Sir Arthur Salter, Sir Josiah Stamp, J. M. Keynes, Sir Basil Blackett, Henry Clay, and Sir W. H. Beveridge. (Allen and Unwin. 4s. 6d.)

The interest of this book will, to most people, be found not in the forces to which the " economic crisis " is ascribed, for on this there is a fundamental consensus of agreement, but rather in the avenues along which the different experts look to find " the way of escape." The more interesting and the major part of this disagreement lies in the varying hopefulness with which the different economists view a policy of control. Whether or not we have seen the end of *laisser-faire*, whatever *laisser-faire* may mean, economists, who are popularly if erroneously understood to be the guardians of its last stronghold, are beginning to try out their hands in evolving a new system, incidentally sacrificing in the eyes of some of their brothers their position as economists. Sir Arthur Salter sees the world suffering through a mixed dose of freedom and regulation, but is hardly prepared to recommend the abolition of either ingredient. To him international agreement on the amount of regulation to be introduced offers at once the greatest, and can one assume, the most appropriate treatment. No doubt this would serve even if it were agreed upon, but other economists prefer other measures.

Sir Josiah Stamp, dealing with a more restricted and domestic problem, asks for more control of the foreign exchange, and by the introduction of tariffs and, presumably, a control of foreign lending. Mr. Keynes wishes international financial co-operation led by this country made strong through a more liberal use of its resources and, again presumably, a control of domestic investment. No doubt these two experts would be prepared to advise the use of such other's prescriptions. Sir Basil Blackett is less content with a restricted policy ; to him seems necessary a stabilising of the price levels,

which to Sir Josiah and Mr. Keynes implies a control of investment, domestic and foreign together with, perhaps, a tariff board, and to Sir Arthur Salter would imply international co-operation, and in addition a control of productive enterprise, distribution and, presumably, commodity stocks. Mr. Clay is sceptical of the value of any other control than that the economic system itself exerts when relieved of hampering interferences whose only justification would be that the system works in a different manner than it actually does. To him an external control of the system can only be ephemeral in direction, harassed in application, and chaotic in effect unless it be prepared to accept what it finds to improve and mould rather than re-organise and direct. The views of Sir William Beveridge, whose task is critical rather than constructive, are more difficult either to obtain or express. But to him control or tariffs are unacceptable, stability unobtainable and international co-operation unpredictable. His remedy consists of waiting for the depression to end as all depressions *have* ended, while for the future, rational action must serve to maintain the economic health of a world in which everyone has his own criterion of rationality.

J.S.

Contributions to the History of Statistics. HAROLD WESTERGAARD. (P. S. KING & SON. 1932. 12s. 6d.)

WRITING a history of statistics must be an unenviable task. It is not sufficient to have merely a passing acquaintance with the classical writers of the last three centuries. A closer and more intimate knowledge is needed together with the ability to assess honestly and fairly their contribution to the theory of statistics. Perhaps the greatest compliment which can be paid to Professor Westergaard is that his book is readable, and he mingles description and criticism just to the right degree. It never becomes a diatribe on the classical writers or loses itself in a mere recital of names or a chronology of events.

In the early chapters of the book the author deals with the development of statistics in the sixteenth and seventeenth centuries and particularly with the pioneer work of Graunt and Halley. He then outlines the history of the period from Gregory King to Süssmilch, from Süssmilch to Quetelet and so to the end of the nineteenth century. Perhaps the last part of the book is the least satisfactory since it deals almost wholly with "vital statistics."

He pays a tribute to the work of private societies in the development of statistics and Manchester people will be glad to see his mention of the Manchester Statistical Society, whose centenary takes place next year.

The book is more for the scholar than the general reader, though it certainly does not warrant Professor Westergaard's own fears that "it can hardly expect much attention." There is so much to be learned from the experience and failures of the classical statisticians that the book should be an inspiration to all interested in statistics. We hope that the excellent reception his book has received in England will encourage Professor Westergaard to bring his work up to date.

The book we understand was written in English and has not been translated. It is a great compliment to us which we should find difficult to return. H.C.

The Mortgage Bank. By JOSEPH L. COHEN. (Sir Isaac Pitman & Sons. 1931. 10s. 6d.)

THIS work is a study of the position and growth in importance of the mortgage bond in the investment market. In the first part of the book, the author is largely concerned with two aspects of this subject. First, an account is given of the nature of bonds of this class in an analysis concerned with the properties affecting security, marketability, risk and yield, and in this way the work examines the subject-matter largely from the point of the view of the purchaser of the instrument. Secondly, a picture is drawn of the organisation of the bond market, particularly in relation to the part taken by the mortgage bank. The two threads of the work are interestingly interwoven in discussions of such matters as the relation of the organisation of the market to the yield on bonds, to the elimination of risk to the private investor and to the security behind the loans made. Naturally, in view of the unformed nature of the mortgage bond market in this country, the majority of the examples given are taken from practice in other countries, but this will make the work more and not less interesting to the student of economics in this country.

In the second part of the book is given a brief sketch of the mortgage bond system in various countries which is interesting if only on account of the criticism made recently of the defects there exist in our own system of financing enterprise. Whether the

more extended use of the mortgage bond and the mortgage institution will provide a remedy in an industrial as opposed to an agricultural country is difficult to decide, and the author, who is not concerned with providing solutions to current problems, makes no very clear indication of the answer that he would give. Throughout the book, however, runs the opinion that mortgage bonds secured ultimately on the value of land provide instruments more secure and more profitable to the investor than many bonds more highly prized, and that a higher degree of marketability as the technique of mortgage banking develops will eliminate this anomaly.

Finally the work includes four appendices dealing with rather detailed problems of the subject, the treatment of which in the text of the work would have detracted from the exposition of the subject-matter.

J.S.

Arbitration Principles and the Industrial Court. By MARY T. RANKIN. (P. S. King. 1931. 7s. 6d.)

ON account of its subject-matter alone the book is one which should receive special attention. We are now doubtless more conscious than ever before of the disequilibrium which may arise through failure of wage levels *inter alia* to move in line, and we are perhaps as far from the discovery of an appropriate remedy as we were immediately after the war. There was then a definite preoccupation with the question of wage regulation which has since become obscured by the more general problems which now engage our attention. It is none the less true that we are not alone in the necessity to resolve this difficulty, and it is opportune, therefore, to enquire how far we have progressed by virtue of the special machinery of which we have made use since the war. Miss Rankin indicates three principles according to which the work of an industrial court should proceed in the matter of wage fixing; first, is the wage offered a subsistence wage? second, is the wage offered a fair wage? and finally, is the wage offered the utmost that the industry can bear? It is with reference to these principles that the survey of the Industrial Court awards is made, leading to the conclusion that no clearly defined basis exists. "In so far as the Industrial Court had any policy in the first five years of its existence, it was that there were certain new standards of life that had been established and *must* be maintained and also *should* be raised if possible." The author goes on to say "The method of Arbitration

pursued by Courts must be distinguished from the possibilities of the method itself. The discredit (into which arbitration has fallen) is not due, as is usually represented, to the *absence* of accepted principles, but primarily to the failure on the part of such courts to recognise that there are principles, and secondly, that their own province is not therefore to lay down other principles but to interpret principles already laid down for them, either by law or resolution, or such principles not being involved, laid down by the parties themselves." The question would seem to be whether such principles as exist can form an adequate basis for the settlement of wage problems, and on this point there must be a large measure of doubt. This very doubt will explain in part the nature of the awards of the Industrial Court. As Professor Clay pointed out, when writing in the first issue of this journal " . . . in the main it does not seem that we can settle once for all the principles on which wages and conditions of labour can be fixed, because the price paid for labour depends upon a whole complex of economic factors which are constantly changing." A realisation of this truth along with the critical analysis which the book gives will assist in deciding what we can expect of a positive nature from the working of an arbitration system in the future.

There is a misprint on page 168 where " mitigated against " should read " militated against."

S.G.R.